87-1455

No. _____

Supreme Court, U.S.
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IN THE

Supreme Court of the United States

OCTOBER TERM, 1987

FLORIDA POWER & LIGHT COMPANY,

Petitioner,

—v.—

WESTINGHOUSE ELECTRIC CORPORATION,

Respondent.

APPENDIX TO PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT

ALVIN B. DAVIS
Counsel of Record
NANCY SWERDLOW KIPNIS
STEEL HECTOR & DAVIS
4000 Southeast Financial Center
Miami, Florida 33131-2398
(305) 577-2835

Counsel for Petitioner

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APPENDIX A

Opinion of the United States Court of Appeals for the Fourth Circuit

UNITED STATES COURT OF APPEALS

FOR THE FOURTH CIRCUIT

No. 85-1089

Argued: June 4, 1986 Decided: August 12, 1987

FLORIDA POWER & LIGHT COMPANY,

Appellee,

—v.—

WESTINGHOUSE ELECTRIC CORPORATION,

Appellant.

Before:

RUSSELL and WIDENER, *Circuit Judges*, and BUTZNER, *Senior Circuit Judge*.

Appeal from the United States District Court for the Eastern District of Virginia, at Richmond. Robert R. Merhige, Jr., District Judge. (CA 75-0677)

IRA M. MILLSTEIN (Richard J. Davis; Richard A. Rothman; Weil, Gotshal & Manges; John S. Battle, Jr.; McGuire, Woods & Battle on brief) *for Appellant.*

ALVIN B. DAVIS (Nancy E. Swerdlow; Steel, Hector & Davis on brief) *for Appellee.*

RUSSELL, *Circuit Judge*:

This litigation had its beginning over two decades ago, though actual litigation has been in progress only a little over a decade. During this period the development of a program of peaceful use of nuclear power as authorized by Congress, begun with such enthusiasm, has since experienced a chequered career, marked by many changes in official policy and subjected to increasing regulatory and judicial constraints. All of these circumstances have contributed to the complexities and difficulties of the present litigation. In its court life of a little over a decade this litigation has generated thousands of pages of trial and discovery testimony and has produced for the record innumerable exhibits, some of an extremely technical nature. Highly expert engineering and scientific testimony and records have been developed. The result has been three separate district court decisions, spread over about four years, which have not been consistent. It is our task on this appeal to resolve the issues that have arisen in the litigation over the last decade in these contradictory decisions.

I.

The subject of the action is a contract between the appellee, Florida Power & Light Company (Florida), and the appellant, Westinghouse Electric Corporation (Westinghouse). This contract had its source in the early 60's when Florida determined to give careful consideration to the construction of a nuclear power plant or plants at Turkey Point, in the State of Florida. Florida's interest in such a development was prompted by the high cost to it of transporting coal or oil necessary for firing its electric generating plants. Nuclear power was thought likely to provide Florida with a less expensive alternative to coal or oil for its power generation. Florida invited three concerns experienced in providing nuclear power plants to submit detailed proposals for the plant it was considering. These concerns were the defendant Westinghouse, the General Electric Corporation, and Babcock & Wilcox. Only Westinghouse and General Electric Corporation, however, responded to Florida's invitation with complete proposals. The proposals of the two were carefully compared and evaluated by Florida over a considerable period of time. Florida finally settled on Westinghouse as its supplier, selecting the latter's pressurized water reactor (PWR) as the favored facility. Florida, in announcing the signing of the contract of purchase with Westinghouse, said the facility selected had "been operating successfully for several years in commercial generating stations" both in this country and abroad.

After Westinghouse and its PWR facility had been chosen by Florida, the parties engaged in the drafting of a definitive purchase contract. The contract negotiations proceeded over a number of months. In the course, drafts were exchanged between the parties. The district court found that, while Westinghouse was supposedly more expert in the field of nuclear energy, Florida was more expert in the drafting of agreements and that it had demonstrated this superior expertise by "out-negotiating" Westinghouse in negotiating the ultimate purchase contract. Whether Westinghouse was "out-negotiated" or not is, however, irrelevant in this context since

the contract was freely and voluntarily executed by the parties. Under the contract executed Westinghouse, in consideration of Florida's agreements, obligated itself (1) to supply Florida with a Westinghouse PWR-type nuclear power installation, (2) to furnish at a fixed price the uranium to be required for the first ten years of the plant's operations, and (3) to grant Florida an option to exercise one of three options for the disposal of the spent fuel discharged by the plant's reactors for the first ten years of the plant's operations. One of the options (Option A) contemplated disposal of the spent fuel by Florida; the other two, with some minor variations, (Options B and C) provided for disposal by Westinghouse. Florida was required to exercise its option on or before "initial criticality" (*i.e.*, before the plant became operational).

Initial criticality, namely when the plants became operational, (the contract had been expanded after initial execution of the contract to include the furnishing of a second plant) was reached in October of 1972 for the first plant and in June, 1973 for the second. The two plants have been successfully operated since completion with considerable savings to Florida and its customers in energy costs. While there was a dispute between the parties with respect to that part of the contract which imposed on Westinghouse the obligation to furnish uranium at a fixed price for the first ten years of the plants' operations, this controversy has been settled between the parties and is not an issue on this appeal. The only part of the contract involved in this appeal is that section dealing with the disposal of spent fuel. In October, 1972, Florida formally elected to require Westinghouse to dispose of the spent fuel discharged by the plants' reactors under Option C of the contract. It had, though, earlier in 1970 informally [and in 1972 formally] informed Westinghouse that it was electing to require Westinghouse to do this.

Option C is set forth in Section 27(a)(2) of the contract. It is:

Section 27. Scope

(a) Westinghouse will:

. . . .

(2) Remove the irradiated fuel from the Plant site and dispose of it as Westinghouse sees fit;

. . . .

Earlier in 1969, Westinghouse had, with the knowledge of Florida and on the assumption it might be required by Florida to dispose of the spent fuel at the plant, begun discussions with Allied General Nuclear Services (AGNS) which had a construction permit from the Atomic Energy Commission (AEC) to construct a reprocessing plant at Barnwell, South Carolina,[1] for the purpose of securing reprocessing of the Turkey Point spent fuel at AGNS's reprocessing plant then under construction as a means of disposing of the Turkey Point spent fuel. By April, 1970, these negotiations resulted in a letter of intent between Westinghouse and AGNS for the reprocessing of such spent fuel at the Barnwell plant "subject to the negotiation of a mutually acceptable agreement." The parties arrived at an unsigned agreement in 1974. AGNS, however, refused to sign the agreement. As summarized in a Westinghouse memorandum, AGNS

> "claimed that its contracts, including a letter of intent agreement with W[estinghouse] were no longer valid and must be renegotiated. AGNS claim[ed] that changing

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1 AGNS was a joint subsidiary of Allied Chemical Nuclear Products, Inc. and Gulf Energy and Environmental Systems, Inc. It had filed an application with the Atomic Energy Commission in November, 1968. After AEC review and a public hearing a construction permit was granted by the AEC and construction commenced. In September and October of 1974, hearings were held on the continuation of construction and matters relating to the issuance of an operating license. At the same time AGNS submitted to the Nuclear Regulatory Commission (the successor of AEC) an application for early receipt and early storage of spent fuel. When President Carter issued his order deferring commercial reprocessing, the licensing procedure was terminated. At that time 117 objections by intervenors on environmental grounds to the licensing of the facility had been filed.

> government regulations [had] increased its costs several times. They are currently seeking government aid in several areas to assure their ability to run the facility. W[estinghouse] and AGNS have discussed several proposals since AGNS refused to sign the original contract in 1974. These proposals have been open ended on the cost to W[estinghouse] while maintaining a degree of profit for AGNS. W[estinghouse] continues to maintain its position that these proposals are not consistent—with the letter of intent and draft agreement agreed on by the parties."

AGNS itself stated its reasons for refusing to execute the agreement in a formal letter to Westinghouse dated March 28, 1974:

> During the more than four years since we submitted our proposal, matters have developed regarding the processing of fuel which are considerably different from those anticipated at time of submission of our proposal. Therefore, we advise that we will not be in a position to execute an agreement until such matters have been further discussed with you.

For some time while these negotiations between AGNS and Westinghouse were going on, Florida had been storing the spent fuel on-site by reracking it. However, it had been understood that, with the exercise of Florida of Option C under the contract, Westinghouse was to remove the spent fuel when it had cooled and this was estimated at about six months after removal of the fuel from the core of the installation. When spent fuel was ready for removal and disposal, Florida called on Westinghouse in mid-1975 to proceed to dispose of the spent fuel at the site. Westinghouse responded to this request by advising Florida in writing on September 2, 1975, that at that time it was unable to dispose of the fuel and was also unable to make "any plans for the removal of the spent fuel from the Turkey Point site." It explained the reason for this position:

> The schedule for removing and reprocessing the Turkey Point discharged fuel is, of course, dependent on the Allied-General Nuclear Services (AGNS) reprocessing facility schedule. Although Westinghouse has had recent discussions with AGNS, major uncertainties still exist which make it impossible to establish the long-range plans you [Florida] inquired about.

No agreement was thereafter reached between AGNS and Westinghouse. In the meantime, Florida became concerned with the accumulation of spent fuel at the site and Westinghouse's failure to dispose of such spent fuel. To resolve this problem, it filed this action.

Florida sought in its action specific performance of Westinghouse's obligation to dispose of the spent fuel or, in the alternative, damages for breach of the contract. Westinghouse answered the action, alleging in defense "(1) that its nonperformance [under the contract was] excused by the common law doctrine of impossibility of performance; (2) that the government's change of policy concerning commercial reprocessing discharge[d] its duty under the force majeure clause; (3) that performance by it has been rendered commercially impracticable under § 2-615 of the Uniform Commercial Code; (4) that the non-availability of reprocessing [had] frustrated the purposes of the contract; and (5) that the parties' erroneous expectation that the spent fuel would be reprocessed discharge[d] Westinghouse's obligation under the doctrine of mutual mistake."[2]

After a trial, the district court issued on June 25, 1981, its first opinion herein, in which it dismissed the several pleas in defense by Westinghouse but deferred for further discussion and review the appropriate remedy for such breach. Three years later, it issued a second opinion, which, though reaffirming substantially its earlier dismissal of Westinghouse's pleas in defense, found that, as a result of unanticipated events, per-

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2 This summarization of Westinghouse's defense to the complaint of Florida is taken from the first opinion herein of the district court. *Matter of Westinghouse Elec. Corp., Etc.*, 517 F. Supp. 440, 450 (E.D.Va. 1981).

formance under the contract by Westinghouse was "vitally different" from that anticipated at the time of the contract's execution, thereby excusing performance by Westinghouse. It, therefore, divided the costs of reracking the spent fuel on-site between the parties but imposed the costs of permanent disposal and storage upon Florida, on the assumption that Florida would be permitted to pass such cost on to its ratepayers. Following a request for rehearing by Florida, the district court issued a third opinion on November 8, 1984, in which, again, it in effect divided the costs of reracking the spent fuel between the parties but imposed the obligation to pay for the storage of such fuel on Westinghouse. Westinghouse has appealed from that order and the judgment issued thereunder. It is that judgment which is the subject of this appeal.

II.

An understanding of the questions raised by this appeal and of the rulings of the district judge herein requires a limited review of the development of atomic energy and, in particular, the Governmental postwar policy toward the private development of peaceful uses of this atomic energy. It was this Governmental policy to foster peaceful use of atomic energy, or, more correctly, the changes in that policy, which have created this controversy and the facts on which Westinghouse's defense of impossibility rests.

Atomic energy, the so-called "splitting-of-the-atom," was initially the product of Government research and action under a program generally described as the Manhattan Project, a program carried out successfully with great dispatch and in the utmost secrecy and security during World War II at a cost of over $2 billion, with an employment force of 600,000 persons spread over 37 installations in the United States and Canada.[3] As first contemplated, its purposes envisioned a military use

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3 *See* 1964 U.S. Code Cong. & Admin. News, 3109.

for the product.[4] In the years after the end of the war, however, interest in the peaceful use of atomic energy in the private sectors was sparked. Any program for such use, though, could evolve only as a part of a broad Governmental program under federal regulations which would preserve the security of our military atomic program and contemporaneously provide for the commercial use of such energy under circumstances assuring the safety and health of the public. Congress, in the Atomic Energy Act of 1954, as amended, 42 U.S.C. §§ 2011 *et seq.* sought to accomplish this purpose so far as the peaceful use of such energy was concerned.[5]

In the legislative findings in support of this 1954 Act the Congress declared that the "[s]ource and special nuclear material, production facilities, and utilization facilities" for the use of nuclear energy were to be treated as "affected with the public interest" and that the regulation of such use and any facilities connected therewith, whether for military or peaceful purposes, were to be strictly regulated "in the national interest to assure the common defense and security and to protect the health and safety of the public." Section 2012(e). Within such purposes, the Congress directed, *inter alia*, the formulation of a "program to encourage widespread participation in the development and utilization of atomic energy for peaceful purposes to the maximum extent consistent with the common defense and security and with the health and safety of the public." Section 2013(d). *See* 1954 U.S. Cong. & Admin. News, pp. 3458-89, § 2051(a)(4) of the Act. The Atomic Energy Commission (AEC) was created and vested with the responsibility of effectuating this program and of carrying out the purposes mandated by the Act, including the development of a commercial nuclear electric industry, Sections 2031 *et seq.*

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4 For a short account of the Manhattan Project, including a comment that, "In 1914, H.G. Wells, in a novel, *The World Set Free*, forecast that this source of energy could be used for both atomic bombs and reactors for peace," *see* Hugh Thomas, *Armed Truce*, 433 *et seq.* (Atheneum, 1987).

5 This program was known generally as the "Atoms-for-Peace Program."

The first area identified by the AEC as one where the peaceful use of nuclear energy might be efficiently and safely applied was electric power generation.[6] The AEC had already, by its own statement, "acquired substantial experience in the design, construction, and operation of nuclear power reactors."[7] It, therefore, knew that the use of nuclear energy to generate electric power was practical. But the use of nuclear materials in power generation had to include more than the solution of the fissionable process and the design and operation of practical and efficient nuclear power reactors; a safe, effective method of disposing of the irradiated fuel at the end of the processing stage was equally necessary because of the severe danger such fuel posed for public health and safety. This spent or irradiated fuel, which includes plutonium with "a half-life of 25,000 years," admittedly posed a "severe potential health hazard" and its disposal presented "complex technical problems." *Natural Resources Defense Council v. U.S. Nuclear Reg. Com'n*, 547 F.2d 633, 638, note 10 (D.C. Cir. 1976).

Both the AEC and Congress recognized that the "public acceptance of nuclear power [was] dependent upon resolving" this problem of disposal of spent fuel which was aptly described as the "most pressing" concern in the promotion of a commercial nuclear power development. 1980 U.S. Code Cong. & Admin. News at 3933. It was plainly recognized that without the assurance of a safe method of disposal, no utility would have prudently considered the hazard of constructing a nuclear power plant. Absent that assurance, any utility which constructed a nuclear power plant could only have looked forward ~~to that~~ early day when inability to dispose of the fuel would have required it to abandon the heavy investment it had made in the plant without any guarantee of recoupment through rates. Moreover, because of the complexity and technological uniqueness and hazard to public health and safety,

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6 For a description of the method of generating electric power by atomic energy, *see* Note, *The Use of Generic Rulemaking to Resolve Environmental Issues in Nuclear Power Plant Licensing*, 61 Va.L.Rev. 869, 872-73 (1975).

7 *See*, 1964 U.S. Code News Cong. & Admin. News, 3112.

disposal of this spent fuel was not an endeavor to be left to private industry but was a matter, the responsibility for which had to be the subject of careful governmental attention and strict regulation. And the Congress had made plain that this was the policy of the Government. Thus, in an official legislative Report reviewing the progress of federal management of nuclear energy under the Atoms-for-Peace Program, Congress had declared positively that "[t]he stated policy of the Federal Government has always been that the safe disposal of high-level waste is to be accomplished under Federal management." 1980 U.S. Code Cong. & Admin. News at 6934.

In discharging this responsibility to assure reasonably safe disposal of spent fuel in its Atoms-for-Peace Program, the Government had but two possible options: one was the promotion of disposal by storage of the fuel in off-site surface depositories; the other the promotion of reprocessing of such fuel.[8] However, the Government had not regarded storage as a feasible and acceptable method of disposal and took no steps to develop or provide this method of disposal of spent fuel. This had been true from the very beginning of the Government's nuclear program and it remained so for all practical purposes until 1977, when reprocessing was effectively suspended by judicial actions and presidential dictates. Neither in its own operations nor in its planning under the Atoms-for-Peace Program had the Government contemplated, recommended, or supported the use of storage depositories for such disposal.[9] Until 1971, it had never given any thought even to an

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8 The district court, in its third opinion, recognized that there were but two options for the disposal of spent fuel. Thus, it said: "If spent fuel is not reprocessed, long-term storage appears to be the only alternative. . . ." 597 F. Supp. at 1468.

Gardner, Florida's witness, testified similarly that "at some point [in the fuel cycle] you have to store it [*i.e.*, spent fuel] or reprocess it.

9 *See Natural Resources, Etc. v. U.S. Nuclear Reg. Com'n*, 685 F.2d 459, 510 (Edwards, J. concurring in part and dissenting in part) (D.C. Cir. 1982):

experimental program for storage of the fuel, and even then it did so only under the pressure of environmental groups contesting the safety of reprocessing. Because of the complaints of these groups, the Commission made a stab in that year at developing an experimental storage depository for spent fuel at Lyons, Kansas. Such attempt, however, quickly foundered under "an intense political attack on the program," followed by the revelation of "technical flaws in the site." This failure of an attempt at experiment with storage was later described in the legislative history of the Nuclear Waste Policy Act of 1982 (NWPA) as "now widely recognized as the landmark event in nuclear waste management history which would color future repository siting activities through the present day." 1982 U.S. Code Cong. & Admin. News at 3793. Five years later, in 1976, after the courts had suspended further licensing of reprocessing facilities pending their action,[10] the commission sought to renew its earlier checkmated 1971 effort by planning an experimental storage depository in Michigan, but a "political uproar quickly brought the program to defeat again, this time even before enough drilling could be accomplished to determine whether technical flaws in the site existed." *Ibid.*, at 3793.

In 1977 President Carter terminated the uncertainty, deferring indefinitely the commercial reprocessing and recycling of the plutonium produced in the commercial nuclear power plants and in the process terminating the promotion of the Atoms-for-Peace Program. He declared in connection with AGNS that "[t]he plant at Barnwell, South Carolina, will

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"[The Commission] has yet to license a private corporation to build a retrievable surface storage facility, if, indeed, such will ever be built. It has yet to choose a site for its proposed long-term repository. And it has yet to license a commercial reprocessing facility, [since the licensing in 1966 of NFS, the opinion might have said by way of qualification], although it now appears that such will be licensed."

10 *See Natural Resources Defense Council v. U.S. Nuclear Reg. Com'n*, 539 F.2d 824 (2d Cir. 1976), *cert. granted*, 430 U.S. 944 (1977), *judgment vacated and case remanded for consideration of mootness*, 434 U.S. 1030 (1978).

receive neither Federal encouragment nor funding for its completion as a reprocessing facility." While he terminated reprocessing, he promised as a replacement the construction of permanent storage depositories for spent fuel. He was, however, unable to obtain Congressional authorization for such construction.[11]

As late as 1982, the Congressional Committee, in reporting NWPA, remarked reprovingly that "[t]he failure of the government to provide a permanent waste disposal facility during more than 30 years of Federal nuclear activities is unmitigated." *Ibid.*, at 3794. And, while the Congress in the 1982 Act provided authorization for storage depositories for spent fuel, even the sites for such depositories have not yet been selected and the Commission in a Report dated August 31, 1984, said that, while it found it to be a "reasonable assurance that a repository would be available by 2007-09 "under the 1982 Act," it cautioned that "[t]he repository development schedule may have to accommodate such contingencies as vetoes of proposed repository sites, prolonged public hearings, protracted litigation, possible project reorientation, or delay in promulgation of siting guidelines." 49 Fed. Reg. at 34663. It seems clear from this review that at no time since the enactment of the Atoms-for-Peace Program in 1954 has storage for the disposal of spent fuel been available for commercial nuclear power plants, nor did any planning for such facilities, and then only tentatively, actually begin until reprocessing was barred in 1977.

Reprocessing as a method for disposing of spent fuel, on the other hand, was from the beginning of the 1954 program regarded and actively advanced by the AEC as not only an available means for disposal of spent fuel from nuclear power reactors but as the only proper and acceptable method. As Judge Edwards in his concurring opinion in *Natural Resources Etc. Council v. U.S. Nuclear Reg. Com'n*, 685 F.2d 659, 502 (D.C.Cir. 1982), said: "The NRC's original assumption was that all spent fuel produced by nuclear power reactors would

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11 1982 U.S. Code Cong. & Admin. News, 3794.

be reprocessed before it was stored." In its own operations prior to the 1954 Act the Government had acted on this assumption and had developed and used reprocessing for the disposal of the spent fuel discharged from its own reactors. Based on this experience, reprocessing was in its judgment an established and proven method for the disposal of the spent fuel. Moreover, all those knowledgeable in the nuclear field agreed with this judgment of the Government that reprocessing should be assumed as the proper way to dispose of the spent fuel. It was manifest then that both the Government and industry accepted reprocessing as the only practical method of disposing of spent fuel during the 60's and that storage was neither recommended nor considered as a proper method of disposing of spent fuel.

It was not enough, though, that reprocessing was an acceptable and proven method for disposing of spent fuel; the power industry had to be assured that reprocessing would be available when the spent fuel discharged by their proposed nuclear power reactors required removal from on-site. This was important because there were in the 50's, when the Atoms-for-Peace Program was launched, no commercial reprocessing facilities, and the only available reprocessing facilities were owned and controlled by the Government. If its program for peaceful use of nuclear energy was to succeed, the AEC recognized the wisdom of promoting the develoment by industry of a commercial reprocessing industry in order to relieve the Government of any responsibility for providing reprocessing for the commercial nuclear plant and the even more important need to allay any concern on the part of the power industry that it would have available reprocessing for the disposal of its spent fuel, *whether commercial reprocessing ever eventuated or not*. The Government addressed the first need by offering to industry access to much of its own technological and engineering research and development particularly in the reprocessing field. On the other hand, in order to assure the power industry about the availability of reprocessing in its own facilities, the AEC issued on February 27, 1957, an official announcement in the *Federal Register*, of "a [Governmental] policy of assuring the

nuclear power industry that the Government would, in the event that commercial reprocessing services were not available at reasonable times and conditions when irradiated power reactor fuels were discharged from their reactors, make financial settlement for the materials contained in those elements, and reprocess them."[12] The language of the Commission's order was:

> The Commission will undertake under contracts individually negotiated with persons licensed pursuant to sections 103 or 104 of the act, and possessing spent reactor fuel or blanket materials, to provide for processing of these materials in facilities owned by the Commission. Such processing will include the mechanical, metallurgical, and chemical treatment of these materials to recover the source and special nuclear materials remaining therein, and the storage of resulting wastes.

This assurance to the utility industry was critical to the promotion of a nuclear power industry. As we have already observed, without this promise, it was highly unlikely that any utility would have been willing to accept the financial hazard of constructing an expensive nuclear power plant. The Government by this announcement intended to relieve this anxiety on the part of the industry by providing the power industry with the positive assurance of the availability when needed of

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12 The phrase "financial settlement for the materials" in this announcement referred specifically to the reusable uranium and plutonium in the spent fuel, both of which would be separated and reclaimed in reprocessing. This salvage value of the spent nuclear fuel [*i.e.*, the reusable uranium and plutonium] was estimated to be greater than the cost of recovery and disposal of the fuel. *See*, 1980 U.S. Code Cong. & Adm. News at 6943, where the spent fuel was described as having "a significant residual value."

It will be noted that while this initial promise of the Government was to expire by its terms on June 30, 1967, the promise was renewed for an additional three years. Despite these time periods, the district court in its third opinion, correctly opined that "the principle underlying the earlier policies, i.e. that government would provide the necessary [reprocessing] services if the industry were unable to do so, remained in effect although the policy was not renewed." 597 F. Supp. at 1470.

facilities to dispose of its spent fuel for such nuclear reactors as it should install.

Subsequent to its official announcement of its assurance to the electric industry that it would provide reprocessing services for any commercial nuclear power plants if commercial reprocessing were not available, the Government demonstrated its firm resolution to carry out that commitment. Although the Government's reprocessing facilities would require some minimal adaptation in order to process spent fuel from the commercial nuclear reactors, the Congress, at the instance of the Commission, had made available funds for such adaptation in 1959. In its 1961 report (p. 47), the Commission had said:

> The Commission's responsibility to receive irradiated fuels from research, test, power and propulsion reactors [for reprocessing] and to make financial settlement for the contained fuel values in accordance with existing notices (sic) has been consolidated at the Commission's Savannah River and Idaho Offices.

Moreover, *see* AEC Report for 1963, p. 54. The AEC clearly demonstrated its ability to reprocess commercial spent fuel by the execution in the early 60's of contracts covering the reprocessing of spent fuel from the Yankee Atomic Electric Plant at Rowe, Massachusetts, and the Dresden Nuclear Power Station near Morris, Illinois. And in its 1966 Report, the Commission advised the Congress that its "Idaho and Savannah River operations received 'spent' fuel for processing from 3 domestic and 10 foreign reactors during the year." It was thus clear that the Government not only intended but was punctually complying with the commitment given by it to the commercial nuclear power industry in its official announcement of 1957.

The electric power industry in turn had responded affirmatively to this activity by the Commission. In 1958, the next year after the Commission's assurance to the power industry, the first license for a nuclear power plant was issued and, since that time, some 82 licenses for the operation of nuclear power

plants were issued.[13] Moreover, in 1964, the Congress, in order to encourage the construction of commercial plants, had authorized utilities contracting for such plants to acquire and use uranium. P.L. 88-489, 78 Stat. 602; 1964 U.S. Code Cong. & Admin. News, 3105.

Industry was not far behind the utilities, which were proceeding to construct nuclear power plants, in responding on its own part to the Government's encouragement to enter the reprocessing field. The first commercial reprocessing facility was undertaken by the Nuclear Fuel Services, Inc. (NFS) in upper New York under a provisional construction permit issued in 1963. *See* 1963 AEC Report to Congress, pp. 53-54. Incidental to this permit, the AEC had entered into an agreement with NFS that if sufficient spent fuel was not offered for reprocessing after completion of the facility to permit the full operation of the facility, it (the Commission) would offer to NFS "certain of the private fuels now on hand or expected to be received by the AEC pursuant to its March 12, 1957, *Federal Register* notice offering to accept irradiated fuels for licensees until June 30, 1967, or until private reprocessing services are available at reasonable charges." The AEC, also, announced:

> [A]fter start-up of the NFS plant, AEC-owned facilities will no longer receive irradiated reactor fuels unless the private processing services are not available at charges and terms which the AEC considers to be reasonable. In addition, the AEC has agreed not to intercede in any arrangement whereby a reactor operator voluntarily agrees to have his fuel processed at NFS. However, if a reactor operator believes that NFS's charges and terms are unreasonable, it can present its case to AEC. If the Commission determines that such charges and terms are unreasonable, the AEC will accept the reactor operator's

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13 *See* concurring opinion of Judge Edwards in *Natural Resources Etc. v. U.S. Nuclear Reg. Com'n*, 685 F.2d at 501.

irradiated fuel under the March 12, 1957, *Federal Register* notice.[14]

Construction had proceeded expeditiously on the reprocessing facility of NFS at West Valley, New York. The groundbreaking ceremony for the plant had been held on June 13, 1963, and in April 1966 (over a month before the contract involved in this litigation was signed) full-scale processing of irradiated reactor fuel began at the plant. That plant operated successfully from 1966 to 1971. In September of that same year (1966) General Electric announced it would build a reprocessing plant near Morris, Illinois, with operations expected to begin by the early 70's. *See* 1966 Report of AEC, p. 359, App. 836. Allied Chemical in the same year declared its interest in developing a reprocessing plant. NFS announced in 1970 "plans to modify and expand its West Valley, N.Y., facility over the next five years,"[15] practically doubling its capacity, and construction had continued in the meantime on General Electric's Morris, Illinois, facility with completion extended to July 1, 1971. In December 1970, a construction permit was issued to the Allied Gulf Nuclear Services (AGNS), a joint subsidiary of Allied Chemical Nuclear Products, Inc. and Gulf Energy, and Environmental Systems, Inc., for the Barnwell Nuclear Fuel Plant to be located at Barnwell, South Carolina. In *Natural Resources Defense Council*, *supra*, 539 F.2d at 832, there is a comment that during this time Westinghouse itself had "applied for a license to undertake mixed oxide fuel fabrication at a proposed plant near Anderson, South Carolina." The testimony in this case also is that in this period Exxon Nuclear Corporation had retained Bechtel Power Corporation to begin

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14 This agreement thus included two important obligations by the Government: 1. It agreed that it would not undercut private processors by competing with them so long as they offered commercial reprocessing to utilities on reasonable terms; and 2. If the power industry did not supply the reprocessors with sufficient spent fuel for economical operations of the reprocessing facility, it would make available spent fuel from its own facilities for reprocessing commercially by NFS.

15 *See* 1970 Report of AEC, p. 92 (App. 835).

designing work on a large reprocessing plant and had acquired an option on 2,000 acres of land at Oak Ridge, Tennessee, on which it intended to build the plant. Encouraged by this response by industry and feeling assured of private industry's ability to supply all needed reprocessing services, the Commission in the late 60's deferred any further development of its own reprocessing facilities in order to service the increasing number of commercial nuclear power plants.

It is obvious that by 1970, reprocessing was firmly accepted by the Government and the utility industry as the approved and proper method for disposing of spent fuel. And this was recognized by the Congress and publicly declared by the AEC. According to the House Report on the NWPA of 1982 (1982 U.S. Code Cong. & Admin. News at 3793), the Congressional understanding was categorically stated:

> During this period [i.e., prior to 1976] the U.S. nuclear industry relied not on the repository development program but rather on a spent fuel reprocessing industry, and recycle of uranium and plutonium, as the solution to the "back end" of the nuclear fuel cycle. Utilities' liability for nuclear spent fuel was expected to end when the fuel was shipped to a reprocessing facility; contracts for reprocessing services were expected to cover management and disposal of waste streams from the facilities.

The Commission in an order published in 40 Fed. Reg. 42801, used similar language in describing the only method contemplated by the electric utility industry for disposing of spent fuel discharged by nuclear power reactors in the period prior to 1977:

> From the early days of the nuclear power industry in this country, electric utilities planning to construct and operate light water nuclear power reactors contemplated that the used or spent fuel discharged from the reactors would be chemically reprocessed to recover the remaining quantities of fissile and fertile materials (uranium and plutonium) and that the materials so recovered would be recycled

> back into fresh reactor fuel. It was contemplated by the nuclear industry that spent fuel would be discharged periodically from operating reactors, stored in onsite fuel storage pools for a period of time to permit decay of radioactive materials contained within the fuel and to cool, and periodically shipped offsite for reprocessing.

This recitation of events makes it plain that at the time the contract in this case was executed (1966) the practicality of reprocessing as a method of disposing of spent fuel discharged from nuclear reactors at private nuclear electric generating plants had been demonstrated both in the Government's plants and in NFS's facility and further that the AEC had, by reprocessing spent fuel for three private nuclear electric generating plants at its own facilities, shown that it was strictly observing its 1957 assurance to the utility industry of providing reprocessing of such fuel at its plants where reprocessing was not available at reasonable charges at private reprocessing facilities. Further, as the later 1970 Reports of the AEC established, NFS was not only successfully operating its reprocessing plant at that time but, encouraged by the success, also was later to seek to enlarge its facility in order to practically double its capacity. And, shortly after the contract herein was executed, other industrial concerns, as we have observed, had undertaken the construction of reprocessing facilities for the purpose of disposing of spent fuel discharged by the private electric utility nuclear plants. Reprocessing of spent fuel appeared both practical and available up to 1970, with a bright and seemingly assured promise of additional commercial reprocessing facilities in the future.

By the early 70's, however, a disturbing cloud on this promising picture of available commercial reprocessing facilities was evident, caused as it was by a rising crescendo of environmental complaints charging that the plutonium in such fuel presented an intolerable risk to health and safety requiring additional stringent regulations, if not complete discontinuance of reprocessing at all. These complaints by environmentalists rested to some extent on the procedural requirements of an

environmental impact statement prior to any licensing of any nuclear power plants or any addition to it under the National Environmental Policy Act of 1969 (NEPA). The environmental complaints against the reprocessing of spent fuel and particularly the presence of plutonium in spent fuel, became from that point a recurrent assault on any licensing of reprocessing facilities and the operation of existing facilities. As one commentator has accurately put it, many of these assaults were intended for "delay" rather than for asserting "any substantive legal challenge." Note, *The Use of Generic Rulemaking to Resolve Environmental Issues in Nuclear Power Plant Licensing*, 61 Va.L.Rev. 869, 878 (1975).

If so, the complaints accomplished their purposes. To resolve these complaints and to avoid costly delays, both the Commission and the contractors took steps to meet the objections by changing to some extent their operations. All of these developments increased substantially the cost of construction of reprocessing facilities and of their operations. The effect of these developments was evident in AGNS's statement of its objection to signing a contract with Westinghouse to reprocess the spent fuel of the Turkey Point plants because, as it said, since its earlier letter of intent, costs of reprocessing had increased "fourfold." At the same time but without abandoning its policy of recommending reprocessing as the appropriate method for disposing of spent fuel, the Commission, which had in effect abandoned reprocessing for these commercial nuclear power plants, sought, as we have already observed, to test, on an experimental basis, storage as a practical alternative for the disposal of such spent fuel. But as Congress was later to observe, the project was quickly abandoned, a victim of public objections and complaints.

By 1972, there were proceedings pending before the Commission to undertake different steps in the plutonium recycle process. These proceedings were described as follows: "Nuclear Fuel Services [for instance had] applied for permission to alter and expand its existing plant; Allied-General Nuclear Services [sought] licensing of proposed separations and uranium conversion facilities presently under construction at

Barnwell, South Carolina; and Westinghouse Electric Corporation [had] applied for a license to undertake mixed oxide fuel fabrication at a proposed plant near Anderson, South Carolina." *See Natural Resources*, 539 F.2d at 832. Certain environmental groups and the State of New York had intervened in these proceedings and raised strong objections to the granting of the petitions on environmental grounds. As a result of these and other objections, the Commission, which had the responsibility of addressing environmental concerns at the licensing stage of any proceedings before it, instituted in 1972 an informal "generic" rulemaking proceeding primarily for the purpose of considering and settling in one proceeding a number of issues of fact or policy common to the large number of licensing proceedings then before the Commission. This proceeding was intended to dispose of long-term "generic" waste disposal environmental concerns for all pending proceedings in one administrative process. All the pending license proceedings were accordingly brought within this broad generic proceeding.[16] In February 1974, the Commission announced, as a step in that proceeding, "that a generic environmental impact statement" (GESMO) would be prepared examining such essential issues as nation-wide environmental effects, safeguards against adverse effects, and alternatives to the recycle activities.

In a later "provisional" decision in this "generic" rulemaking proceeding, issued in 1975, the Commission suggested a ban on any licensing of reprocessing facilities or spent fuel transportation until the final GESMO report. When this "provisional" decision was publicized, the nuclear industry protested the terms of the decision, claiming it would impose excessive costs in purchases of additional enriched uranium and in meeting the costs of spent fuel disposal. The Commission responded to these complaints by issuing its final decision in November 1975, in which it provided that "certain interim commercial licensing [of reprocessing] *should* be allowed" and

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16 This summarization of the "generic" proceeding is a paraphrase of Judge Wilkey's careful statement of the proceedings in his dissent in *Natural Resources, Etc. v. U.S. Nuclear Reg. Com'n*, 685 F.2d at 518-19. (1982).

that a "final version of the GESMO study, both in environmental concerns and safeguards . . . be issued in 1976." This order of the Commission was reviewed by the Second Circuit in accordance with the review procedure set forth in the Act, on petition of the environmental groups. The result of such review was the decision in *Natural Resources Defense Council v. U.S. Nuclear Reg. Com'n*, 539 F.2d 824.[17] The Court held that the Commission could not grant licenses for reprocessing facilities or for the transportation of plutonium and uranium mixed oxide fuel "until the GESMO Report and supplement had been issued in final form and the Commission had made its final decision thereon." The Court, however, affirmed the procedural guidelines developed by the Commission in its decision for further proceedings in this case. Certiorari was sought in *Natural Resources*, 430 U.S. 944 (1977),[18] but in October 1976, two months after the decision, President Carter issued a policy statement urging temporary deferral of reprocessing.[19]

Previously, in 1971, NFS, discouraged by the delays in acting on its request for authority to increase its reprocessing facilities and doubtful that it could operate under the increasing restraints imposed, abandoned its application and operations. All other applications for the construction of reprocessing facilities were tied up in what seemed to be interminable dilatory proceedings. As we have said, the Government had abandoned its policy of accepting spent fuel from the commercial nuclear power plants for reprocessing. By that time there

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17 In *Natural Resources Defense Council v. U.S. Nuclear Reg. Com'n*, 547 F.2d 633 (D.C. Cir. 1976), *reversed in part and remanded in part sub nom. Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519 (1978), the Court reached much the same conclusion, and, while the Supreme Court reversed the narrow ruling of the Court of Appeals on the procedural issue, it did not reverse the holding below that additional findings were required on the substantive environmental issue.

18 The Supreme Court granted *certiorari* but remanded the case to the Court for consideration of mootness after the several presidential actions later noted, 430 U.S. 1030 (1978).

19 *See* House Report on the Nuclear Waste Policy Act of 1982, 1982 U.S. Code Cong. & Admin. News, 3794.

were no reprocessing facilities available anywhere for spent fuel discharged by private nuclear power plants. This was the situation which forced Westinghouse to advise Florida it could not carry out its contract to remove and dispose of the Turkey Point spent fuel.

In November of 1976, two operators of nuclear electric generating plants, facing the same dilemma as Florida, filed applications for an amendment of their licenses to operate in order to increase their capacity for on-site storage of spent fuel as the only immediate method of disposing of spent fuel on an interim basis. The proposed increases "contemplated [in the petition as filed] no increase in the physical dimensions [of the pools for on-site storage], but rather the installation of new racks that would permit closer spacing of the fuel assemblies in the pool." Both of the petitions were predicated on the absence, after the decision by the Second Circuit, of any available method for reprocessing or storage of such spent fuel and the imminent necessary discontinuance of operations at the plants unless additional on-site storage were permitted until the Government provided a new means of disposal. In reviewing orders issued in connection with those petitions the Court in *Minnesota* said: "No one disputes that solutions to the commercial waste dilemma are not currently available." *State of Minn. v. U.S. Nuclear Regulatory Com'n*, 602 F.2d 412, 416 (D.C. Cir. 1979). The results of these proceedings were orders authorizing reracking on-site by commercial nuclear plants. *See*, 1982 U.S. Code Cong. & Admin. News, 3803.[20]

At this point in the controversy on how to deal with the spent fuel, President Carter announced that "spent fuel reprocessing and the development of advanced plutonium non-based reactors would be indefinitely deferred in this country." President Carter in the same announcement told "the domestic

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20 While reracking on-site provided a temporary method of storage, it did not constitute effective disposal of the spent fuel with its ingredient of plutonium. Plutonium has "a half-life of 25,000 years" and because of this, it "must be isolated from the environment for 250,000 years before it becomes harmless." *Natural Resources Defense Council, supra*, 547 F.2d at 638.

nuclear industry that the Federal government would provide interim storage for utilities' spent fuel," 1982 U.S. Code Cong. & Admin. News, 3794. President Carter's administration was, however, unable to obtain authority to provide such interim storage from Congress, and no storage facilities for spent fuel were either planned or constructed in accordance with President Carter's official announcement.

In October 1977, the Department of Energy announced its "New Spent Fuel Policy" inplementing President Carter's April 1977 announcement of the indefinite suspension of "civilian reprocessing of spent nuclear fuel in order to evaluate alternative fuel cycles and processes which may reduce the risk of nuclear weapons proliferation." It described this action as "a logical extension . . . of the long-established Federal responsibility for permanent disposal of high-level wastes." It stated a policy of planning permanent storage, backed up by interim storage by private interests whom the Government might interest in establishing such interim storage facilities. The immediate payment of a future-calculated storage fee should be required, and on payment of that fee, the Government would take full title to the spent fuel. The Department, however, added, that, "[Q]uestions surrounding the permanent disposition of nuclear wastes have not yet been resolved." The Department's announcement included this language: "If, at some time in the future, the U.S. should decide that commercial reprocessing or other energy recovery methods for spent fuel can be accomplished economically and without serious proliferation risks, the spent fuel [can] either be returned with an appropriate storage charge refund, or compensation could be provided for the net fuel value." Comments were later invited from the nuclear utility industry. In reporting the response of the utilities, the Department observed that: "Almost unanimously the utilities voiced their concern with the policy of deferral of reprocessing. . . . Virtually everybody desired recognition of the future value of the recovered fuel. This relates in part to the virtually unanimous position on reprocessing as desirable." The Nuclear Regulatory Commission issued a "Memorandum of Decision" on December 23,

1977, after the above announcement and comments. In this Memorandum it decided to terminate the GESMO proceeding and proceedings "on pending or future plutonium recycle-related license applications" with some limited exceptions not relevant here.[21]

In October 1981, President Reagan, however, shifted ground and issued a "Series of Policy Initiatives" in this area. In this Statement, the President expressed the need to develop a commercial nuclear power industry. He recognized the problem of "commercial waste disposal" and, in order to assist in removing the handicaps to the solution of such problem, President Reagan lifted "the indefinite ban which previous administrations placed on commercial reprocessing facilities in the United States." He added: "[W]e will pursue consistent, long-term policies concerning reprocessing of spent fuel from nuclear power reactors and eliminate regulatory impediments to commercial interest in this technology, while insuring adequate safeguards." The importance of having "the private sector take the lead in developing commercial reprocessing services" was reiterated. That Government had failed in meeting "its responsibilities" in this area was accepted in the Statement. 17 Weekly Comp. of Pres. Doc., 1101-02 (October 12, 1981).

At this point Congress realized that "[f]ailures in the Federal repository development program, the collapse of the domestic spent fuel reprocessing industry and quickly deteriorating public confidence in our ability to deal safely with nuclear waste, together with other critical safety and economic issues, were seriously undermining the strength of the domestic nuclear industry" and that "[n]uclear waste management was on its way to becoming a top Federal energy priority." 1982 U.S. Code Cong. & Admin. News, 3794-95. This realization was the catalyst for the enactment of Nuclear Waste Policy Act (NWPA) of 1982, 42 U.S.C. § 10101, *et seq.* (1983).

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21 *See Natural Resources, Etc. v. U.S. Nuclear Reg. Com'n*, 685 F.2d at 506 (concurring and dissenting opinion of Judge Edwards).

This Act of 1982 provided for the expeditious development of permanent, deep repositories for nuclear waste. While these depositories were being developed, Congress anticipated that, by increased reracking, on-site storage for spent fuel could be assured for the operating plants, with the proviso that, in those special cases when the Commission should find that there were not on-site facilities for storage of spent fuel in the interim before the completion of the permanent depositories, the Department of Energy would offer interim storage for such fuel until such permanent depositories were completed.[22] All utilities using nuclear fuel were required to enter into a negotiated contract for the payment of a fee to the Department of Energy for such future storage to be available after the Government had constructed permanent storage facilities. The Congress contemplated that the costs of disposal of spent nuclear fuel should be paid by those ratepayers who receive the benefit of the lower cost of nuclear-generated electric power. The reason for this was stated in the Senate Report on the 1980 Act. *See* 1980 U.S. Code Cong. & Admin. News, 6941:

> Congress finds that the responsibility for both the storage and disposal of nuclear waste rests with the Federal Government and that the costs associated with such storage and disposal should, to the greatest extent possible, be borne by the direct beneficiaries of nuclear activities.[23]

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22 It is interesting that the Congress recognized that Federal facilities for reprocessing were "exempt from licensing by the Nuclear Regulatory Commission," this being the thing that had stymied commercial reprocessing. *See* 1982 U.S. Code Cong. & Adm. News at 3803.

23 The background for this statement by the Congress was expressed in the Senate Report on the Low-Level Radioactive Waste Policy Act of 1980 (1982 U.S. Code Cong. & Admin. News, 3803):

> [A] bottleneck developed in the nuclear fuel cycle when reprocessing failed as a domestic industry. The private sector was unprepared for large-scale storage of spent nuclear fuel previously supposed to be sent for reprocessing, and the Federal government was unprepared to take the spent fuel for disposal.

Actually, President Carter had "emphasized [at the time that he proposed in 1977 the development of permanent storage] that all costs of storage and permanent disposal will be borne through fees paid by the direct users of the facilities and will ultimately be borne by those who benefit from the activities generating the waste."[24] And, at the instance of Florida, the Florida Public Service Commission had agreed in principle with this proposition holding that the ratepayers receiving the benefit of the nuclear fuel should pay the costs of permanent disposal of the spent fuel and had agreed that Florida could make provision for the collection of these charges in its rate base. It is true that the Commission did note that there was a controversy between Florida and its "vendors" over certain parts of this cost and it reserved determination on this part of the costs.

Despite the strong words and the confident assertions reflected in the Report on NWPA, the Department of Energy has failed five years later to identify a site for the permanent storage of spent fuel discharged by the private nuclear generating plants. When such sites will finally be located remains indefinite and speculative. In any event, this record of Government activity in the development of commercial nuclear power generation, it would seem, has created a situation recognized by the Court in *State of Minn. v. U.S. Nuclear Regulatory Com'n*, 602 F.2d at 416, to be "undisputed" that since 1972 there have been not only no available reprocessing facilities to dispose of spent fuel from the Turkey Point plants but also there has been no available alternative off-site storage facilities for such disposal. When there will be any facility for the disposal of such spent fuel remains uncertain to this day.

It is interesting that, although reprocessing has been stymied, reliance on reprocessing in disposing of the spent fuel is still considered as possible at some point in the Government's disposal program. This is evident from the language in the

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24 *See* testimony of Dr. N. Barrie McLeod as an expert witness on behalf of Florida in its application to the Florida Power Service Commission for authority to charge costs of storage against Florida's ratepayers. Appendix at 768.

Congressional Reports on the Low-Level Radioactive Waste Policy Act of 1980. The Congress said the bill was "neutral with respect to the option for further processing of the spent fuel or the high-level waste" (p. 6937) and referred to the continuance of rights of the nuclear plant to the residual value of the spent fuel taken by the Government from the plant should reprocessing of such fuel be later available.

Such was the record of Governmental activity in promoting the commercial use of atomic energy in the generation of electric power. This record is an integral part of the proceedings herein and was in large part the basis for many of the findings of fact and conclusions stated by the district court in its opinions herein. We, therefore, turn now to the opinions of the district court.

III.

Over a period of almost four years, the district court filed three opinions in disposing of the issues in this case. In all the opinions it was accepted that Westinghouse had not performed its agreement to dispose of the spent fuel discharged by the Turkey point reactors for the first ten years of the reactors' operations. The dispute between the parties, therefore, centered on the issue whether such non-performance was excusable under the facts of the case. Admittedly, the opinions are not entirely consistent in their resolution of this issue; in fact the opinions admit the inconsistency as between the second opinion, on the one hand, and first and third, on the other.[25] For a full understanding of the district court's findings and reasoning in these several opinions, it is necesssary to review them separately. We begin our review with the first opinion, entered on June 25, 1981, and reported in 517 F. Supp. 440.

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25 Such inconsistency is perhaps understandable in view of the changing conditions in the disposal of spent nuclear fuel over the period of the three opinions.

A. *District Court's First Opinion*

In this initial opinion, the district court treated all the pleas in excuse filed by Westinghouse and found them inadequate to excuse performance by Westinghouse of its obligation to dispose of the spent fuel. The primary emphasis of this opinion, however, was on Westinghouse's plea of excuse because of impossibility of performance, though, as we have said, it considered and dealt with the other defenses in its opinion. The district court justified its primary emphasis on impossibility, observing that all the defenses were related to impossibility and rested on the same factual assumptions as that defense. Since in our opinion the resolution of the defense of impossibility of performance may well resolve the issue, we confine our review of the first opinion to its treatment of that plea. Actually, this seems to have been the later treatment of the case by the district court, since its second and third opinions deal almost exclusively with the impossibility defense.

Any analysis of the district court's first opinion must begin with a statement of the doctrine of impossibility of performance as a defense to a breach of contract suit as enunciated in the opinion by the district court. Looking to the doctrine as stated in the older traditional version of impossibility, as phrased in *Texas Co. v. Hogarth Shipping Co.*, 256 U.S. 619, 629 (1921), and the modern, more liberal doctrine of commercial impracticability, as stated in *Transatlantic Financing Corp. v. United States*, 363 F.2d 312, 315 (D.C. Cir. 1966), the district court summarized the current statement of this doctrine of impossibility or impracticability of performance and defense to a breach of contract to be as follows: When the contracting parties contract in contemplation of the existence of "some particular thing essential to its performance" and "before the time of performance and without the fault of either party the particular thing ceases to exist or be available for the purpose," the promisor will be excused from performance, irrespective of whether the existence of the thing was stated as a condition of the contract or not. Under those circumstances performance has become in the words of *East-*

ern Air Lines, Inc. v. McDonnell Douglas Corp., 532 F.2d 957, 991 (5th Cir. 1976), "so vitally different from what was anticipated [by the parties] that the contract cannot reasonably be thought to govern." To this statement of the doctrine, the district court added two subsidiary principles applicable to the invocation of the doctrine. In the first of these the district court drew a distinction between the situations where the means of performance was specified in the contract and the situations where the means of performance, though clearly contemplated by the parties, was not specified in the contract. In the former situation, impracticability of performance under the specified means excused performance; in the latter situation, the impracticability of performance by the concededly contemplated means will not excuse performance if there is available a reasonable alternative means of performance that can be utilized without excessive costs. The district court found warrant for these additions in the rulings in *Transatlantic Financing Corp. v. United States*, 363 F.2d 312, 315 (D.C. Cir. 1966), and in *American Trading and Production Corp. v. Shell International Marine, Ltd.*, 453 F.2d 939, 941 (2d Cir. 1972). The other addition the district court made in the application of the doctrine is deduced from the decision in *United States v. Wegematic Corp.*, 360 F.2d 674 (2d Cir. 1966). As the district court construed that decision, it held that if "the promisor entered [into] the contract knowing that the technology [or means of performance] it intended to use was uncertain and that difficulties and added expense might occur, . . . [in that situation] the risk of such difficulties was implicitly allocated to the [promisor]."

The district court concluded that the application of this defense of impossibility or impracticability of performance, as deduced by it from the authorities cited, raised four factual questions which it phrased as:

> (1) Was performance as agreed rendered impracticable? (2) Did the claimed impracticability arise from an unforeseen contingency? (3) Was the non-occurence of the contingency a basic assumption of the contract? (4) Did the

parties, explicitly or implicitly, allocate the risk that the contingency would occur?

The district court resolved all those factual questions against the defendant and, therefore, dismissed Westinghouse's defense of impossibility or impracticability of performance.

The district court said, in answer to the first question, that performance as agreed had not become impracticable. In reaching this conclusion, it cited *Transatlantic Financing* and *American Trading*, both of which involved sea-carriage contracts for transportation of cargo originally intended to move through the Suez Canal but which, as a result of the closing of that Canal during the Israeli-Egyptian War, was forced to move through the longer and more expensive Cape of Good Hope route. The carrier sought payment for the excessive costs of the longer Cape of Good Hope route. The plea of impracticability was dismissed. The reasoning of the Court in both cases for such dismissal was stated in *American Trading*, 453 F.2d at 942:

> This leaves us with the question as to whether the owner was excused from performance on the theory of commercial impracticability (Restatement of Contracts § 454 (1932)). Even though the owner is not excused because of strict impossibility, it is urged that American law recognizes that performance is rendered impossible if it can only be accomplished with extreme and unreasonable difficulty, expense, injury or loss. There is no extreme or unreasonable difficulty apparent here. The alternate route taken was well recognized, and there is no claim that the vessel or the crew or the nature of the cargo made the route actually taken unreasonably difficult, dangerous or onerous. The owner's case here essentially rests upon the element of the additional expense involved—$131,978.44. This represents an increase of less than one third over the agreed upon $417,327.36. We find that this increase in expense is not sufficient to constitute commercial impracticability under either American or English authority.

> Mere increase in cost alone is not a sufficient excuse for non-performance (Restatement of Contracts § 467 (1932)). It must be an "extreme and unreasonable" expense (Restatement of Contracts § 454 (1932)).

The district court found this case analogous to the situation stated by the Court in *American Trading*. To reach this result, it said that, while "both Westinghouse and Florida contemplated that the spent fuel would be reprocessed,"[26] reprocessing was not "viewed as the exclusive means of performance. Indeed, reprocessing was not in actuality the contemplated 'means' of performance at all; it was the contemplated disposition of the spent fuel *after* performance." (Court's Italics). It then apparently assumed that there was a method of disposal of the spent fuel that provided an alternative to reprocessing[27] and, having made that assumption, it found that, though "the additional cost of removal itself [by the alternative method] might be sufficient to constitute impracticability in another context," Westinghouse assumed the risk that reprocessing would prove more expensive than anticipated. It added that any increased expense incurred by Westinghouse in disposing of the fuel was not "sufficient to rise to the level of impracticability."

The district court dismissed any claim that the impracticability of performance arose out of an "unforeseen occurrence" because as it said, Westinghouse knew at the time it executed the contract that "reprocessing was, at best, a highly uncertain proposition. In fact, as a practical matter, there was no such thing as commercial reprocessing in 1966 . . . [and] at the time the contract was executed, reprocessing for Florida's antici-

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26 At another point in its opinion, the district court had found that there was "abundant evidence that the parties contemplated reprocessing [as the method for disposing of the spent fuel]."

27 At the time this opinion was issued, the Act of 1982 providing for future permanent storage in Government-built and Government-owned depositories had not been enacted and there was no available alternative means of performance.

pated spent fuel was . . . unavailable." Further, it held Westinghouse was in effect the author of its own problem because of its own "less than zealous attempts to obtain a facility." Apart from its long-drawn-out negotiations with AGNS, Westinghouse, it held, had "made no significant attempts to secure storage or reprocessing facilities, and gave little, if any, serious consideration to building its own facility. . . ." Such were the grounds on which it resolved this question against Westinghouse. Based on these grounds primarily, the district court found that the existence of reprocessing was not "a basic assumption of the contract" and that the risk that reprocessing would be unavailable was one Westinghouse implicitly assumed. As evidence in reaching its finding that the availability of reprocessing was not a "basic assumption" of the parties, the district court had relied on the same reasoning expressed by it in responding to the previous findings. Thus, it said, *i.e.*, that "it is difficult to discern how the availability of reprocessing could have been a basic assumption of the parties, given the fact that commercial reprocessing did not exist at the time the contract was executed, as well as the fact that the contract specifically calls for Westinghouse to do with the spent fuel as 'it sees fit.' " It also declared apparently as an additional point that "Florida deemed reprocessing too speculative to undertake it." It dismissed the fact that the contract's bargained-for price per kilowatt hour had been arrived at by factoring in the costs of reprocessing as not reflective of "the parties' anticipation that the fuel would be reprocessed," finding that this circumstance was "not sufficient to transform an expectation into a basic assumption or a condition of performance." In finding that Westinghouse had assumed the risk of the unavailability of reprocessing, the district court said: "knowing that reprocessing, not being available even then as a practical matter, was highly uncertain, Westinghouse agreed to a contract term which in plain, unequivocal, unqualified language, required it to remove the spent fuel from Florida's plants. If this is not assumption of risk, the Court confesses itself unable to discern what would be."

Having made these findings, based on its construction of the governing principles of the defense of impossibility or impracticability of performance, the district court concluded that the defense had not been made out of impossibility/impracticability of performance in this case. It accordingly turned to the determination of a remedy. At this point, it confessed it faced what appeared to be a difficult, if not unresolvable, dilemma. The district court realized that Florida could not obtain from another party "performance substantially similar to that promised by Westinghouse" but "[b]y the same token . . . the very factors which might render it difficult for Florida to contract for removal with a third party would, obviously, make performance by Westinghouse difficult."[28] It suggested that these reasons argue for "consideration [being given] to the hardship of performance in deciding the question of remedy." The district court expressed the confidence that "the parties themselves [were] in a far better position [than it was] to find an equitable solution" for the controversy and it returned the matter to the parties to seek to arrive at what it described as "fair and equitable solutions of [the] myriad complex problems" in the case and accordingly called on the parties to make "a good faith" effort to agree on a proper decree. It added that if "[f]urther evidence . . . [is] necessary," provision for such would be allowed. Finally, the district court said that, should the parties be unable to arrive at a fair decree after taking additional testimony and conferring among themselves, the parties should report such fact to the district court which, at that time, would enter its own decree.

B. *Second Opinion of District Court*

After the issuance of the first opinion herein, additional testimony was taken, the Act of 1982 became law, and a panel of experts, selected by the parties and approved by the district court, filed a report on the means of disposing of the spent fuel. Based on these additions to the record, the district court

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28 Compare this finding with the language of Judge Mulligan in *American Trading*, quoted *supra*.

heard extended arguments of the parties. Approximately three years after its initial opinion, the district court filed its second opinion in this controversy. This opinion has not been reported.

In its second opinion, the district court reviewed some of the developments since the issuance of its first opinion. It took note of the enactment of NWPA in 1982, providing for future permanent off-site storage of spent fuel under a mandatory program established under the Act whereby nuclear power plants were to enter into agreement with the Government for future removal, transportation and storing of the spent fuel. Florida, it found, had executed a contract with the Department of Energy for ultimate future storage in the Government's to-be-built storage facility under the Act at an estimated cost of $72.4 million paid by it at the time to the Department of Energy. The district court recognized and the parties agreed there was "currently no place to which the spent fuel in issue [could] lawfully be removed from Florida's Turkey Point site," though it later disputed Westinghouse's assertion that the record established that "since 1975 it has been impossible to remove spent fuel "from that site."[29] It said that "a portion of [the spent fuel] could have been removed prior to Florida having to . . . spend over $9 million in reracking." It found in that connection that Westinghouse could have developed storage for the spent fuel except for its commitment to reprocessing. It ascribed Westinghouse's failure to construct storage and to continue to look to possible reprocessing because of its economic interest in realizing a profit from the sale of the extracted usable materials in the spent fuel. It agreed with the parties that the only immediate way to handle the spent fuel for some fifteen years was by "rerack[ing] the Turkey Point spent fuel pools again."

Under the circumstances of the case as it thus perceived it, the district court found specifically "that the portion of the contract that contemplated removal of the spent fuel by West-

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29 This conclusion seems inexplicable in view of other findings of the district court and the undisputed evidence that the spent fuel could not have been removed from the plant site in 1975.

inghouse has become of no force and effect because of circumstances that neither party anticipated nor could reasonably be expected to have anticipated. Although it is not simply the additional costs, which are substantial, cost is a factor that must be considered." Citing *Eastern Air Lines, Inc. v. McDonnell Douglas Corp.*, 532 F.2d 957, 991 (5th Cir. 1976), it said that "the passage of the Act rendered performance of the contract 'vitally different' from what the parties anticipated at the time of execution of the contract," adding that "[w]hile the Court found that Westinghouse assumed the risk that reprocessing would not come to pass, neither it nor Florida could have reasonably foreseen that Westinghouse would, as a matter of law, be precluded from fulfilling its obligation to remove the spent fuel from the Turkey Point site within a reasonable time" . . . nor could it have been "reasonably foreseeable that the anticipated removal of the spent fuel would impose a financial burden in excess of $70 million." It cited in explanation of the latter statement *Hadley v. Baxendale*, 9 Exch. 341, 156 Eng. Rep. 145 (1854) which, as stated by the district court, held that only those damages "that arise naturally from the breach, or those that were in the contemplation of the parties at the time the contract was made" are recoverable. It found specifically in that connection that "the government, having brought about an abrupt revocation of the reprocessing alternative for reasons of national policy, [had] proceeded to develop the necessary alternative—disposal [by storage] of spent fuel."[30] It then found that the Act of 1982 (NWPA) "contemplate[d] that the costs of final disposition of spent fuel will be passed through to ratepayers, and The Florida Public Service Commission has determined that as a matter of policy it was fair and equitable for ratepayers to pay the final disposition costs." Florida and its ratepayers, according to the district court, had benefited substantially from the construction of the Turkey Point plants, the approximate savings to ratepayers being $1,330,750,000 during the years 1973 through

30 Of course, the Government has not to this date developed storage facilities for spent fuel; in fact, it has yet to identify the site or sites for such storage.

1980, and, even "after consideration of projected costs of repair," $5,246,588,000 in the years 1982 to 1991.

Finally, the district court concluded that where performance of a contract becomes "commercially impracticable and/or impossible, the Court has the authority to order an equitable adjustment of the rights and obligations of the parties" and that in this case, "equity will be served by requiring Westinghouse to pay the interim storage costs of the first and second re-rackings but leaving the other costs of interim and long-term disposal on Florida." It accordingly entered judgment for the reracking in the sum of $9,473,242 in favor of Florida against Westinghouse but granting no judgment in favor of Florida for the sums it had paid the Department of Defense for future permanent storage of the spent fuel or added costs.

C. *Third Opinion of District Court*

The district court's third opinion, entered after granting a rehearing on the motion of Florida, is reported at 597 F. Supp. 1456 (E.D. Va. 1984). This decision began by disapproving certain parts of the court's second decision, declaring that decision to be "in at least some significant regards, inconsistent with its 1981 decision and . . . the inconsistencies arise from errors of law in the later decision." The court did not identify specifically the significant conclusions of law in its second opinion to which it referred except as those differences might be gleaned from the later statements in the opinion. It in effect reaffirmed the findings made by it in its first opinion, as modified by developments since 1981. It then took notice of those significant factual developments that it said had taken place after the district court's 1981 decision. The first of these developments was that "further technological study has revealed that it is indeed possible to 're-rack' the Turkey Point spent fuel storage pits a second time, so as to provide sufficient on-site storage for all the spent fuel that the reactors will discharge over its [sic] useful life." A second development identified by the district court was the enactment of NWPA in

1982, which the district court said represented a "firm step[ ] toward creating a permanent disposal site for nuclear spent fuel," to be available in 1998. Finally, it recognized that generally the 'generators and owners' of spent fuel could typically be utilities," which "would be allowed," under the Congressional intention, "to pass the expense [of permanent storage] on to their ratepayers." This intention and the rule of allocation, the district court said, "was not intended to alter whatever responsibility a party such as Westinghouse might have to a utility." It based this conclusion on a short colloquy on the floor of the House of Representatives while the bill was under consideration. There was another fact of "minimal" significance which had not been previously discussed in either of the prior opinions: President Reagan had in 1981 "lifted the ban on commercial reprocessing." The district court recognized, though, while this development made commercial reprocessing available, the "intense political opposition" that had already been generated to reprocessing remained and, whether the presidential ban continued or not, the licensing of a reprocessing facility, in the court's opinion, "would [have been] long and expensive at best," so much so that "no further business venture into commercial reprocessing [was] likely to take place."

Having set forth this background, the district court addressed anew Westinghouse's plea of commercial impracticability or impossibility. While as we have said it affirmed the findings previously made in its 1981 opinion, it did so by adopting in effect for its decision on such facts the doctrine of impossibility of performance as set forth in the Restatement (Second) of Contracts § 265. As formulated by the district court in this opinion, the doctrine requires that the impracticability or impossibility of performance which will satisfy the doctrine must rest on a frustration of performance caused by the occurrence of an event "the non-occurrence of which was a basic assumption on which the contract was made." It would seem, too, that the district court accepted in its discussion of the doctrine that "[i]f . . . the existence of a specific thing is necessary to the performance of a duty [under the contract]

. . . [and] its failure to come into existence, destruction, or . . . deterioration . . . makes performance impracticable," that fact is an event, "the non-occurrence of which was a basic assumption on which the contract was made." Restatement (Second) of Contracts § 263. The district court had recognized both in its first and second opinion, and implicitly accepted in its third opinion, that the application of the doctrine does not depend on the language of the contract, but comes into play when "[e]xtraordinary circumstances may make performance so vitally different from what was reasonably to be expected as to alter the nature of that performance." This was the language of *Transatlantic Financing, supra*, which the district court cites and seems to assume to have given a correct exposition of the doctrine of impossibility or commercial impracticability of performance. And it plainly recognized that, while added cost may not amount to a frustration of such basic assumption "within the normal range of risk," "[a] thing is impossible in legal contemplation when it is not practical; and a thing is impracticable when it can only be done *at an excessive and unreasonable cost*."[31] (Italics added).

The district court, in applying these criteria of the doctrine, found at the outset that performance had not been frustrated. It based this conclusion, as it had in its first decision, on its finding that "Westinghouse [had] not convinced the Court that it could not have removed at least some of the spent fuel exactly as agreed—*i.e.*, within six months to a year—had it energetically attended to its contract obligations in the early 1970's." 597 F. Supp. at 1476. In reaching this conclusion, the district court assumed that AGNS's facilities, although "built for reprocessing, had existing storage capacity in 1975 which would have been more than enough for the spent fuel disputed here" and had "Westinghouse pressed its contract negotiations with AGNS more aggressively, . . . at least some of this space [in the AGNS facility] could have been made available to

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31 This, again, is the language of *Transatlantic Financing, supra*, at 315.

Westinghouse." A few paragraphs later in its opinion, the district court said that

> However, although the AGNS facility could conceivably have been expanded, the evidence suggests that any attempt to expand the AGNS facility into a full-scale AFR facility would have met intense and possibly insurpassable political opposition. . . .
>
> In this light, the Court is not prepared to find that Westinghouse could have forced AGNS to convert its facility to a full-scale AFR that could have accepted the Turkey Point spent fuel throughout the life of the 1973-1983 contract between Florida and Westinghouse. Nor is the Court prepared to find that Westinghouse could have built its own AFR to have served that purpose. It would be purely speculative to reach a conclusion in either direction on these two points.
>
> However, Westinghouse has not disturbed the Court's 1981 finding that had Westinghouse acted with diligence, it could have removed some portion of the spent fuel to the existing storage space at the AGNS facility or to similar space at a number of other sites summarized in the experts' report.

It ends this phase of its findings with the declaration that, whatever may have been the situation earlier, the enactment of the 1982 Act provides the means whereby "Westinghouse can now ultimately meet its obligation in reference to removal and disposal of the spent fuel as a consequence of Florida's having contracted with DOE for its removal to the permanent federal repository" and the costs of such removal and storage under the contract was not such as to support a finding of excessive expense, considering the profit that Westinghouse should have made on other parts of its contract with Florida. In short, it found that it had been possible for Westinghouse, in part at least, to have performed its obligation to dispose of the spent fuel prior to 1976 and, so far as the future was concerned, it could now perform that obligation absolutely as a result of the enactment of NWPA in 1982.

Secondly, it found that any reliance by Westinghouse on the unavailability of reprocessing was something clearly foreseeable by the parties and, therefore, not an "unforeseen occurrence within the doctrine." It gave three reasons for the finding that the unavailability of reprocessing was so foreseeable that "a reasonable, informed person, or company, in the nuclear industry should have taken them into account." In its view, commercial reprocessing was, first of all, unproven technologically. Beyond this, it was reasonably foreseeable that, for safety reasons, reprocessing would likely be subjected to continuing more stringent and expensive regulations which could destroy the viability of the industry. And, these uncertainties and difficulties either were or should have been seen by Westinghouse and that, because of this, it is to be assumed as a matter of law that Westinghouse voluntarily accepted the risk of the unavailability of reprocessing and could not rely on such unavailability as a defense. It dismissed Westinghouse's contention that it had a right to rely on the Government's assurance that, if commercial reprocessing were not available, it (the Government) would provide reprocessing in reasonable terms, declaring that, while "Westinghouse [was] clearly correct that the Government was promoting private reprocessing . . . during this period," those "promotional efforts never rose to the level of an assurance of commercial viability" of reprocessing; in fact, it said the Government's promotional activities were merely "to generate sufficient experience to enable the AEC to evaluate whether or not nuclear power had practical value in this application [*i.e.*, on the commercial generation of electric power]," adding that "[g]iven that this was an acknowledged open question, the AEC was in no position to guarantee the industry's viability, and it did not do so." It recognized that such finding somewhat conflicted with the Commission's 1957 official announcement, but said that this assurance expired on December 31, 1970. Despite this statement, the opinion then retreated by adding that "the principle underlying [this assurance] . . . remained in effect although the policy was not renewed [after 1970]."

This conclusion that the parties—Westinghouse, in particular—had no right to rely in May 1966 on the Government's assurance that reprocessing on reasonable terms would be available seems to conflict with an essential finding made later by the district court. Thus, near the end of its opinion the district court states:

> Westinghouse contends that a series of Government actions in the 1970's and 1980's have rendered performance of the "remove and dispose" obligation impossible and/or impracticable. As discussed *supra*, the Court rejects for the most part Westinghouse's factual contentions in this regard. All that remains to be addressed is the significance of the fact that the Government did not act in a timely fashion in honoring its implied commitment regarding spent fuel. The Court is satisfied that this failing on the part of the Government was an unforeseeable contingency the non-occurrence of which was a basic assumption of the contract and which has rendered performance of Westinghouse's implicit timeliness obligation to Florida impossible. No one could have anticipated the poor planning, delays, and policy reversals that have added up to more than twenty years of delay, after the outlook for commercial reprocessing became clouded, before the Government will be providing any alternative. Both Florida and Westinghouse were aware that reprocessing might not be available, but neither of them anticipated that no alternative means of removal would be available until 1998 or after. This assumption can be inferred from their mutual agreement to build only six months to a year's worth of capacity into the original storage facilities at Turkey Point.

It concluded this phase of its opinion with this: "The failing in the Government's policies was that a permanent means of disposal was not available in time to avoid *unnecessary* costs for interim storage *either* on site *or* off-site. . . . [T]he Court is satisfied that at least some of the interim storage costs must be attributed solely to unnecessary delays in the fulfillment of

the Government's implied commitments. Westinghouse canno fairly be held liable for the full amount of these unnecessar costs (Court's Italics)."[32]

The most important conclusion stated by the district cour was its reiteration of its earlier conclusion in its first opinio that reprocessing was not a basic assumption of the parties a the time of the execution of the contract. It is the thesis of bot the first and third opinions that Florida never assumed th availability of reprocessing at the time of the contract's execu tion. The district court conceded not once but repeatedl throughout all three of its opinions and findings that reprocess ing was the "contemplated" means of disposal at the time. I declares this to have been "abundantly clear." Yet the distric court states that while the parties "contemplated" that repro cessing would be the means of performance, that was no equivalent to finding that the parties intended that reprocessin should be used for disposal of the spent fuel. It did, however recognize that all "knowledgeable" in the nuclear industr assumed that reprocessing was the proper way in which t dispose of spent fuel. In reaching the conclusion that Florida had not, however, had this view the district court, as we have already indicated, relied on a memorandum prepared by Gardner, an assistant to Florida's chief executive officer, even though Gardner testified that ultimately reprocessing was understood to be the only way to dispose of spent fuel. We later discuss this memorandum.

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32 There are two interesting aspects of this language of the district court. First, the "implied commitment" of the Government in its 1957 official announcement related to *reprocessing*. There was nothing in that announcement about storage of the spent fuel; the announcement was confined to reprocessing services. In fact, storage was not an alternative considered by the Government until in the 1970's and then only after the attacks by environmental forces began against reprocessing. Second, earlier in both its first decision and in this opinion the district court declared that there was no "commitment" by the Government to provide means for the disposal of spent fuel; in this finding, the district court reached a completely contrary conclusion of an "implied commitment" of the Government.

The district court sought to answer its earlier reliance in its second opinion on the rule in *Hadley v. Baxendale*, as broadly adopted in Section 351 of the Restatement (Second) of Contracts that "[d]amages are not recoverable for loss that the party in breach did not have reason to foresee as a probable result of the breach when the contract was made." It declared that this language of the Restatement "focus[es] as it does on the foreseeability of the *loss* rather than the foreseeability of the *damages*" (Court's Italics) and that there was "nothing unforeseeable about the damages except perhaps the amount: it was not only foreseeable but a virtual certainty that if Westinghouse failed to remove and dispose, Florida would suffer damages in the amount necessary to obtain removal and disposal from some other source. . . . Uncertainty in the amount, rather than the kind, of damage is not the sort of uncertainty that *Hadley* addresses." This conclusion of the district court is premised on its assumption that storage was always foreseen as a viable alternative, albeit at some greater cost, to reprocessing as a means of disposing of the spent fuel.

Finally, the district court, by way of remedy, provided that the costs of reracking at the Turkey Point site should be divided between the parties but that the full costs of ultimate permanent storage (whenever it became available, if ever) of the spent fuel should fall on Westinghouse. In reaching this conclusion, it found that the Government had failed in its commitment to provide a means for the disposal of spent fuel if no other means was available and that, while the 1982 Act provided such "other means" it had not done so when the need for disposal was required. It held that this failure of the Government was an unforeseen occurrence which excused Westinghouse so far as prompt performance was considered. It did not relieve Westinghouse entirely, however, since, in its view, Westinghouse could have taken care of some of the spent fuel if it had been diligent in carrying out its obligation under the contract. For this reason, it divided the cost of reracking between the parties.

We now proceed to analyze this reasoning of the district court in the light of the facts and circumstances of this case.

IV.

The first task in resolving the issues in this case is the determination of the governing principles of law. There is no controversy that Westinghouse was obligated under the contract to dispose of the spent fuel discharged by the Turkey Point nuclear reactors or that Westinghouse in 1975 breached that obligation. The question is whether this breach of that section of the contract was excused under the facts of the case. As we have already observed, Westinghouse asserted a number of legal grounds for excuse. But the primary ground which received the greatest attention in the district court's first opinion and was essentially the only ground discussed and analyzed in the second and third opinions was the defense of impossibility or commercial impracticability of performance. Since we think the case can be disposed of on the basis of that defense we shall confine our discussion to that ground of excuse.

It is important to emphasize at the outset that the doctrine of impossibility-impracticability does not depend on nor is it limited in its application by the specific language of the contract. This is true because of the rationale of the doctrine as stated both in Corbin and Williston and as expressed in both the Restatement and the Uniform Commercial Code. Williston puts this rationale as follows:

> Any qualification of the promise is based on the unfairness or unreasonableness of giving it the absolute force which its words clearly state. In other words, because the court thinks it fair to qualify the promise, it does so and quite rightly; but clearness of thought would be increased if it were plainly recognized that the qualification of the promise or the defense to it is not based on any expression of intention by the parties.[33]

Corbin expresses the same thought in these words: "The doctrine [of impossibility of performance] is invented by the

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33 18 Williston on *Contracts* § 1937, p. 33 (Jaeger, 3d ed. 1978).

court in order to supplement the defects of the actual contract. The parties did not anticipate fully and completely, if at all, or provide for what actually happened."[34]

In its Introductory Note on Impracticability of Performance in the Restatement (Second) of Contracts, at pp. 309-310, the commentators phrased the doctrine's justification in slightly different language but without any change in the basis of the doctrine itself:

> Even where the obligor has not limited his obligation by agreement, a court may grant him relief. An extraordinary circumstance may make performance so vitally different from what was reasonably to be expected as to alter the essential nature of that performance. In such a case the court must determine whether justice requires a departure from the general rule that the obligor bear the risk that the contract may become more burdensome or less desirable.

In its actual phrasing of the doctrine in Section 265 of the Restatement (Second) of Contracts the commentators stated the doctrine thus:

> Where, after a contract is made, a party's principal purpose is substantially frustrated without his fault by the occurrence of an event the non-occurrence of which was a basic assumption on which the contract was made, his remaining duties to render performance are discharged, unless the language or the circumstances indicate the contrary.

It supplements this statement with a definition of the event the "non-occurrence of which [may be] a basic assumption on which the contract was made" in § 263 of the Restatement:

> If the existence of a specific thing is necessary for the performance of a duty, its failure to come into existence, destruction, or such deterioration as makes performance

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34 6 Corbin on *Contracts*, § 1331, p. 360 (1962 ed.).

> impracticable is an event the non-occurrence of which was a basic assumption on which the contract was made.

In section 2-615(a) of the Uniform Commercial Code, nonperformance of the contract is excused "if performance as agreed has been made impracticable by the occurrence of a contingency the nonoccurrence of which was a basic assumption on which the contract was made," thus treating impossibility as synonymous with commercial impracticability as an excuse for breach of a contract.[35]

These statements of the doctrine, save for their disapproval of the rationale of the doctrine as resting on a theory of "implied condition," do not depart substantially from its enunciation in *Texas Co. v. Hogarth Shipping Co.*, 256 U.S. 619, 629-30 (1921), which the district court took as its guide in the application of the doctrine in its first opinion. In that case, the Supreme Court said:

> [W]here parties enter into a contract on the assumption that some particular thing essential to its performance will continue to exist and be available for the purpose and neither agrees to be responsible for its continued existence and availability, the contract must be regarded as subject to an implied condition that, if before the time for performance and without the default of either party the particular thing ceases to exist or be available for the purpose, the contract shall be dissolved and the parties excused from performing it.

It is obvious from these statements of the doctrine that the language of the contract itself is irrelevant in the application of the doctrine, since, as Williston aptly comments,[36] the doctrine of impossibility or commercial impracticability of performance as a defense to an action for breach of contract is "essentially

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35 This is essentially the language of *Eastern Air Lines, Inc. v. McDonnell Douglas Corp.*, 532 F.2d 957, 991 (5th Cir. 1976), a case cited with approval by the district court in its several opinions.

36 18 Williston on Contracts, § 1931, p. 6.

an equitable defense," without any basis in the specific language of the contract in question or "any expression of intention by the parties," but resting firmly "on the unfairness [and] unreasonableness of giving [the contract] the absolute force which its words clearly state." We accepted this reasoning as the basis for the doctrine in *The Opera Company of Boston, Inc. v. Wolf Trap Foundation*, 817 F.2d 1094 (4th Cir. 1987) and deduced from the Restatement and other authorities cited that under the doctrine, "a party relying on the defense of impossibility of performance must establish (1) the unexpected occurrence of an intervening act, (2) such occurrence was of such a character that its non-occurrence was a basic assumption of the agreement of the parties, and (3) that occurrence made performance impracticable. When all those facts are established the defense is made out." 817 F.2d at 1102.

We proceed to a review of the facts in this case under the requirements as phrased by us in *Opera Company* to determine whether under the clear evidence the defense of impossibility/impracticability of performance as an excuse for breach of the contract by Westinghouse has been established.

V.

The first step in this determination in any particular case is the ascertainment, first, of the exact act or thing the promisor obligated himself to perform or furnish and, second, the identification of the means whereby the parties contemplated performance by the obligor was to be had. It is at this initial point in the application of the doctrine that the district court erred. It is easy, of course, to ascertain the obligation imposed under Option C on the promisor, Westinghouse, which Florida elected to require in the 70's, some five years after the contract herein was signed. That obligation is to "remove the irradiated fuel . . . and dispose of it as Westinghouse sees fit." The promise thus encompasses both removal from the site and disposal of the spent fuel off-site. The parties perceived no difficulty in removal provided there was some place to which

the material could be taken for disposal. After all, the difficulty was the method or means of disposing of this spent fuel. The district court held that the method or means of disposing of the spent fuel was "left unspecified" in the contract. However, the district court found at varying points in its opinions that the parties "intended," or "contemplated," or "anticipated," or "understood" at the time they executed the contract that reprocessing would be the method for disposing of the spent fuel.[37] This finding is repeated time after time in the district court's first opinion and is abundantly supported in the record.[38]

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37 We have looked both to the third opinion and the first opinion for the district court's factual findings, since, in its third opinion, the district court reaffirmed its findings of fact (except such as had occurred since that decision in 1981) in its first opinion.

38 Actually, this fact was most conclusively developed by the district court itself in the testimony of one of Florida's own witnesses. In the examination of Florida's head of the department of nuclear analysis, the testimony turned to a contract executed in the late 60's after the contract for the Turkey Point plants had been executed. This contract was between Florida and Combustion Engineering involving the construction of another nuclear power plant. In this contract, it was agreed that Combustion would purchase the spent fuel discharged from the new plants' reactors. The district court addressed this question to the witness and elicited the quoted answer:

> THE COURT: Then your understanding, then, in simple language, was that Combustion was to purchase your spent fuel?
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> THE WITNESS: That's right.
>
> THE COURT: And remove it?
>
> THE WITNESS: That's right. At a firm price.
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> THE COURT: Is it fair to say that any reasonable person, even reasonably knowledgeable about the business, would understand that they intended to reprocess it? You didn't expect them to keep the fuel on their dresser, did you, as a souvenir? They must have thought there was some commercial value to it, is that a fair statement?
>
> THE WITNESS: Certainly when they signed the contract they did.

Later, the district court directed this question to the same Florida witness and received this response:

While the district court said that "[t]here can be no doubt that both Westinghouse and Florida contemplated that the spent fuel would be reprocessed" as the "means of disposal," the district court at another point stated that "reprocessing was merely an option to Westinghouse" for such purpose and was not "viewed as the exclusive means of performance."[39] If, by this language, the district court was saying merely that reprocessing was not specified in the contract as the means of disposing of the spent fuel, such statement is accurate. But if it was meant to suggest that the parties foresaw and contemplated or intended some means of disposal other than reprocessing, the statement is manifestly erroneous. This is so because there was no means of disposal available other than reprocessing when the contract was signed in 1966. At that time the "only alternative" to reprocessing had always been "long-term storage," as the district court said.[40] It repeated this

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THE COURT: Anybody with any sense knows that Combustion wasn't going to purchase your spent fuel just as a nice guy to get it out of there. You knew that they intended to reprocess it. Don't you think everybody in the company knew that that's what they intended? You might not have agreed that they were going to make a lot of money out of it, but they must have thought so, right?

THE WITNESS: Yes, sir.

THE COURT: And is it just as fair to say that the same situation was just as true with Westinghouse, that everybody understood that that's what Westinghouse intended to do, was to reprocess it?

THE WITNESS: Yes. But whether that reprocessing resulted in positive or—you know—that was a very complicated situation. And I'm sure that if reprocessing costs go up and uranium costs go down, they wouldn't reprocess. It wouldn't be economical.

39 517 F. Supp. at 453. The district court said at one time in its opinion:

> "Indeed, reprocessing was not in actuality the contemplated 'means' of performance at all; it was the contemplated disposition of the spent fuel *after* performance. The means of performance, of removal, were left unspecified." (Court's Italics) *Ibid.*

40 597 F. Supp. at 1468.

finding at another point, saying that, "[i]f spent fuel is not reprocessed, long-term storage of some sort appears to be the only alternative. . . ." Gardner, Florida's primary witness on the issue, conceded that "at some point [in the fuel cycle] you have to store [the spent fuel] or reprocess it." However, there has never been any long-term storage available as an alternative to reprocessing for this spent fuel. The Government has never provided such storage facilities and no private venturer has ever constructed or even considered the construction of such a facility. This fact is undisputed by the parties. By the Act of 1982, it is true that the Government authorized the construction of long-term storage but such facilities are unlikely to be available, under the most favorable circumstances, until the first quarter of the 21st century. The fact remains that long-term storage was not available in 1966 when the contract was executed, was not available when performance by Westinghouse was required under the contract, and is not now available for disposal of spent fuel from commercial nuclear power plants. Reprocessing, therefore, was not just an "option" for disposal; it was the only, the "exclusive," means for disposing of spent fuel in the contemplation of the parties in 1966 when the contract herein was executed. By 1975 the Government discontinued any reprocessing for commercial nuclear plants; there were no commercial reprocessing facilities operating or licensed, and there was no off-site storage facilities. Thus, in 1975, when Florida called upon Westinghouse to dispose of the Turkey Point spent fuel the "intended" means of disposal did not exist nor was there any reasonable alternative available. Such findings, compelled as they are by the undisputed facts, make out a textbook illustration of the circumstances warranting the application of the doctrine of impracticability/impossibility of performance as a valid excuse for breach of a contract.

The district court, however, found a number of reasons not to accept Westinghouse's defense of impossibility/commercial impracticability—even though the record appeared to establish a clear basis for that defense. The district court assigned three reasons for denying Westinghouse's plea of impossibility of

performance: 1. Reprocessing was in the opinion of Florida, if not of Westinghouse, too "uncertain" and "speculative," to have been a basic assumption of the contract the non-occurrence of which would excuse performance by Westinghouse; 2. Westinghouse's failure to perform was due in part at least to its lack of "zeal" and reasonable effort to secure a means of disposal at time performance was due; and 3. Disposal of the spent fuel could be "accomplished [without] extreme and unreasonable difficulty, expense, injury or loss."[41] We shall examine these three reasons separately, beginning with the first one stated.

A.

The district court's first objection to sustaining Westinghouse's defense of impossibility is stated in its conclusion that reprocessing under the evidence was too "uncertain" and "speculative" to have been "a basic assumption of the contract" at the time the contract was made. It would find in particular that Florida at all times considered reprocessing to be "uncertain" and "speculative" and for that reason, it never considered reprocessing itself, even though the district court repeatedly in its opinion said that both parties "contemplated" or intended to dispose of the spent fuel by reprocessing. If, by this conclusion, the district court was deciding that reprocessing as a method of disposing of spent fuel was "speculative" and "uncertain", its conclusion was completely refuted by the record.

Reprocessing was a method of disposal developed and perfected by the Government when it began the processing of atomic material in the 1940's. It had been used for disposal of spent nuclear material successfully ever since. Other nations that had been associated with the United States in the development of atomic energy had constructed without any difficulty reprocessing facilities and were reprocessing spent fuel from

41 This is a paraphrase of the ruling in *American Trading & Production Co. v. Shell International Marine, Ltd.*, 453 F.2d 939 (2d Cir. 1972).

commercial nuclear plants in those facilities. The Government assumed, from the very onset of the program for the civilian or peaceful use of atomic material under the Act of 1954, that reprocessing would be the accepted method of disposing of spent fuel and it, from its superior knowledge of the use of atomic materials, recommended this method of disposal of the spent fuel generated under the Atoms-for-Peace program authorized in the 1954 Act. The program, however, was slow to develop. Before 1957 no private nuclear plant had been constructed or planned. One reason for the delay was undoubtedly concern over the ability to dispose of a nuclear power plant's spent fuel. The Government recognized this. In order to breathe life into the program of private nuclear power plants the Government issued in March 1957 a formal assurance (the district court described it as "implied commitments," 597 F. Supp. at 1478) that if commercial reprocessing were not to become available on reasonable terms for the spent fuel of any nuclear power plant constructed under its license issued under the authorization of the 1954 Act, it would reprocess in its own plants such spent fuel.

It was this assurance that was the catalyst for the development of the civilian nuclear power program. With this assurance of the Government the utility industry, relying on the Government's assurance, began aggressively to construct nuclear power plants, confident that if commercial reprocessing never developed (there was none in 1958 when the first nuclear power plant was begun; actually, the first reprocessing power plant was not completed and did not begin operation until April 1966, about a month before the contract in this case was signed) government reprocessing would be available. A finding of uncertainty of reprocessing would "fly in the face" of the undisputed fact that reprocessing was thus being successfully carried on both here and abroad. In fact, the Government in 1966 was actually reprocessing fuel under its 1957 commitment to utilities which had constructed nuclear power plants after that announcement. Reprocessing, unlike the method in *Wegematic* which the district court cited in its opinion, was not an untried "revolutionary" method which had never been success-

fully used;[42] it was a long-established successful process the construction and operation of which presented no known obstacles.

Nor do we think the record justifies the assumption made by the district court that Florida did not understand that the Turkey Point spent fuel would be reprocessed. Everything in the evidence refutes such notion. Florida was not uninformed or "uncertain" about reprocessing or the fuel cycle. Gardner, one of Florida's negotiators, testifed that he had "read everything [he] could get hold of, the books and publications. [H]e had talked to whomever [he] could talk to, the vendor, fuel people, government people, to get an idea about the various elements of the fuel cycle, including reprocessing prior to the signing of the contract herein." He claimed on the basis of this study and inquiry an acquaintance with the whole fuel cycle process. And he called upon this information in the preparation of the extensive memorandum in which he reviewed for Florida's chief negotiator and chief executive officer, Smith, the full fuel cycle.

In this memorandum Gardner set forth in detail and extensively the steps in the process of using nuclear fuel to generate electric power. In particular, it dealt fully with the critical matter of disposing of the plant's spent fuel. It identified reprocessing as the method for disposing of the spent nuclear fuel at the proposed plants. In describing reprocessing, it expressed no uncertainty about the process itself or even about the commercial feasibility of reprocessing as an industry. It did state that NFS was the only company engaged at the time [1965] in constructing a plant for which it was then accepting applications for reprocessing, but it gave a very confident picture of other large industrial interests which were either

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42 There is no basis in this record for likening reprocessing to the "revolutionary" computer system which had never been developed but existed only as an idea in the promoter's mind, discussed in *Wegematic*, a case which the district court cites as analogous to this case. Everyone "knowledgeable in the industry" assumed, based on actual experience, that reprocessing, both governmental and private, had been proven as a viable industry under conditions as they existed in 1966.

actively considering or had taken active steps to engage in the construction of a reprocessing facility. In this regard, the memorandum was to the same effect as the testimony of the head of Florida's nuclear analysis department, which was that the utility industry (which it may be assumed to include Florida) in the 60's was enthusiastic about reprocessing.

The memorandum raised only one word of caution. This caution did not relate to either the feasibility or the availability of reprocessing, whether performed in Government plants or in private commercial plants. It dealt strictly with the stabiiity of the market price for plutonium. The only relevance this price of plutonium had was in assessing the value of the spent fuel, a matter of interest to a party accepting responsibility for the spent fuel with the expectation of deriving a profit from the by-products of reprocessing consisting primarily of reusable uranium and plutonium. At the time of this memorandum, the Government offered a guaranteed market and price for plutonium. But this guaranteed market and price would expire in 1970, and if the military program were curtailed, this market might, in the opinion of the memorandum, likewise be curtailed and the price paid by the Government reduced. This, as we have said, was a matter of interest to one who would assume the risk of reprocessing because, if the market or price for plutonium deteriorated, one of the profitable items which was to be developed from reprocessing might not provide the anticipated profit. This remark on the possibility of a weak market for plutonium after 1970,[43] which incidentally is the only part of the memorandum quoted by the district court, did not question the feasibility of reprocessing, nor did it assume reprocessing to be "uncertain" or "speculative;" it suggested only that if Florida elected to handle the reprocessing of the

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43 It is interesting that in President Reagan's 1981 "memorandum" order, as quoted earlier, providing for resumption of reprocessing, he listed as one of the reasons for resuming reprocessing of spent fuel from private electric plants was the need of the Government to obtain plutonium from private sources. This memorandum is quoted in full in the concurring and dissenting opinion of Judge Edwards in *Natural Resources, Etc. v. United States Nuclear Reg. Com'n*, 685 F.2d 459, 509-10 (D.C. Cir. 1982).

Turkey Point spent fuel, it should recognize that there was some risk on the market and price of the by-product plutonium after 1970. This memorandum thus establishes if anything that Florida regarded reprocessing as feasible and any uncertainty it had related simply to the future price that might be expected for plutonium should Florida elect to accept responsibility for disposal of the plants' spent fuel, a matter Florida did not resolve until almost five years after the contract was signed.

There are cogent evidences in the contract itself that make any finding that Florida was uncertain about reprocessing and had scrupulously refused to make any agreement assuming that reprocessing would be used to dispose of the spent fuel from these Turkey Point plants, simply incredible, without any reasonable foundation in the record. The only authority that the district court cites to support its statements of uncertainty about reprocessing is some obscure testimony of Gardner, by that time (1981) an executive vice-president of Florida. Testifying almost fifteen years after the contract was signed and after the disastrous developments in reprocessing in the 70's before him, Gardner said he had never considered reprocessing practical. However, a few months before the contract was signed, Gardner had, as we have pointed out, prepared a memorandum which discussed reprocessing as the accepted method for disposing of spent nuclear fuel and expressed to his superior no doubt whatsoever about the practicality or availability of reprocessing. Further, after his testimony that he thought reprocessing to have been impractical, Gardner was forced to concede, in response to a question from the district judge, that spent fuel could only be disposed of by "reprocessing" or "storage." There was no storage available in 1966; therefore, the only method known by Florida in 1966 when this contract was executed after months of evaluation was reprocessing. If reprocessing was uncertain, as Gardner would suggest, then Florida signed a contract to construct a nuclear power plant at great cost, knowing at the time under his testimony that there was only an "uncertain" and "speculative" means of disposing of the spent fuel from those plants. When it is recognized that the ability to dispose of spent fuel is an essential element of a

successful, operating nuclear power plant, a fact which this record makes crystal clear, then it is necessary, if one is to accept the ambiguous belated professions of uncertainty by Gardner, to find that Florida chose to hazard all the monies required for the construction of the Turkey Point plants despite its belief that the disposal of the spent fuel of those plants was, in its mind, uncertain. To assume that Florida would have made such a palpably imprudent decision stretches too far credulity.[44] Moreover, later in the 60's Florida entered into another contract with Combustion Engineering for the construction of a nuclear power plant.[45] Gardner admitted that there it was expected and contemplated that the spent fuel of the plant would be reprocessed. Such action is plainly inconsistent with any notion that Florida regarded reprocessing in 1966 as "uncertain."

Gardner further sought to justify Florida's action in executing the contract herein, even though reprocessing was in his opinion "uncertain," by saying that Florida, under the contract, had transferred the problem to Westinghouse and thus was disinterested in the problem.[46] Actually, the contract as it

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44 In its very first opinion, the district court recognized that, without a means of disposal of the spent fuel discharged by its nuclear reactors, nuclear power plants could not be operated successfully. There it held that in the absence of reprocessing or storage, the "Turkey Point plants will be shut down by the year 1986 as to one plant, and 1988 as to the other." 517 F. Supp. at 450.

45 The testimony of this point is given in footnote 38, *supra*.

46 In its first decision, the district court appears to have accepted this reasoning. Thus, it said:

> Under the option which it exercised [Option C], if spent fuel were not reprocessed, Florida ran little risk, and though the parties contemplated that Westinghouse would remove the spent fuel and reprocess it, the contract by its terms requires Westinghouse to "dispose of it as Westinghouse sees fit." 517 F.Supp. at 445-46.

By this statement, the district court clearly recognized that reprocessing was the intended method of disposal of both parties. It seems to dismiss intention as unimportant; that the contract is absolute and admits of no

was executed in 1966 did not transfer that responsibility to Westinghouse; that responsibility was only transferred to Westinghouse when informally in the latter part of 1970 and again formally in 1972, some four or five years after the contract was signed, Florida elected not to take Options A or B, under which it (Florida) would have been responsible for disposal but to take Option C which then placed at that time the responsibility on Westinghouse for disposal. But Option C covered only the first ten years of the Turkey Point plants' operations. These plants, however, had an expected operations life of thirty years. All the cost evaluations of the project were based on that expected life. Thus, Florida, with the twenty year exposure for disposing of the spent fuel after Westinghouse's obligation under Option C would have expired, had proportionally a far greater interest in the practicality and availability of reprocessing than did Westinghouse, with its limited ten year responsibility under Option C. It, therefore, is no answer to respond blithely that Florida had no responsibility and no interest in the availability of reprocessing.

In addition, it must be remembered that Florida reserved to itself the right to exercise an option to handle the reprocessing of the Turkey Point spent fuel at any point up to criticality (*i.e.*, when the plants were completed or sooner for five years after the contract was signed). This right in Florida to make such later election was a right favoring Florida, not Westinghouse. There would have been no occasion for the inclusion of such an option if Florida, as the district court said, was adamantly resolved not to have any traffic with reprocessing or disposal of the plants' spent fuel. There is even indication in the record that Gardner drafted at least one version of the options, action inconsistent with any notion that Florida never had any intention to reprocess the Turkey Point spent fuel. Even more significant, Florida never exercised its option until

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qualification. This reasoning would deny the established defense that the spent fuel had to be disposed of after 1985 for another twenty years and that the later period was Florida's obligation of disposal.

the early 70's when the chorus of complaints and the multitude of interventions in all pending proceedings before the AEC involving reprocessing had arisen. There was no reason why, if it intended firmly from the outset of negotiations until up to the execution of the contract not to have anything to do with reprocessing, Florida had the option included in the contract and, even more important, did not exercise its option immediately and did not wait until it had become evident that the likelihood of reprocessing had become cloudy. Neither Florida nor the district court in its decisions offered any explanation for this delay. Yet the obvious one under the circumstances was that, until the early 70's, Florida regarded reprocessing as perfectly feasible and wished to take the full time allowed under the contract to determine whether its election should be to give the responsibility of disposal to Westinghouse or to undertake such responsibility itself.

If further evidence is required of the intention of the parties that reprocessing was the means and the only means of disposal contemplated by the parties, that evidence is supplied by the record of negotiations leading up to the execution of the contract herein and by the contract itself. Reprocessing was the only method of disposal that is identified in any memoranda of discussions between the parties, or in any documents or proposals passing between them during these negotiations. All through the contract negotiations, the parties manifested their firm intention that the spent fuel discharged by the proposed Turkey Point plants would be reprocessed. In its proposal preceding the signing of a letter of intent between the parties, Westinghouse spelled out in great detail the terms of the proposed contract. Such terms included repeated references to reprocessing as the method for disposing of spent fuel. This proposal was submitted to Florida and was the subject of discussion between the parties. There is no record in the testimony that Florida ever took issue with reprocessing or raised any question about either its feasibility or its availability.

A few months before the contract was signed, Florida obtained from Westinghouse a statement detailing the fuel needs of the Turkey Point plants under the proposed contract.

This statement showed in express terms that the spent fuel discharged from the plants' nuclear reactors would be reprocessed. It went further to spell out the amount of reusable uranium and plutonium that would be realized from reprocessing the spent material over the life of the plants. About two years after this contract was executed, Gardner requested another such compilation. The professed reason for which Florida wished this compilation was for inclusion of the material in the compilation in certain material Florida was required to file for licensing either by the AEC or the Florida Public Service Commission. It is significant that at this time Florida was negotiating with Combustion Engineering for the construction of another nuclear power plant. It is possible Florida wanted this information in order to check the reprocessing proposal by Combustion, since it seems agreed that reprocessing was included in this new plant. *See* note 38, *supra*. Again, the compilation demonstrated that the spent fuel would be reprocessed, and the amounts of reusable uranium and plutonium that would be realized from the reprocessing were stated.

There is another document in the record that makes even more incredible the suggestion that Florida never considered reprocessing as a means of disposal of the plants' spent fuel. It is a memorandum of a conference between representatives of Florida and Westinghouse. The memorandum was prepared by Gardner, who was one of the participants in the conference representing Florida. This conference took place two days before the contract was actually signed. In memorializing what had been discussed and agreed at the conference, Gardner said in part:

> Dollard [who was a representative of Westinghouse at the conference] proposed a formula whereby even though the initial price for the fuel assemblies would vary, either Florida would get an increase in burn-up, an adjustment in price after reprocessing, or both. The adjustment would be such that Florida's fuel cycle costs would be fixed with reference to the warranted Regional Energy

> Prices in Option B and would be based on fixed assumed values for shipping, reprocessing, and plutonium and uranium prices.

With some minor changes this proposal was accepted by Florida. It is true that this agreement refers to Option B which Florida did not select. However, until Florida made its selection five years after the contract was signed, this language bound the parties so far as Option B was concerned. Moreover, Option B, like Option C, designated Westinghouse as responsible for disposing of the spent fuel and was largely similar in requirements. This memorandum demonstrates clearly that both parties expected that there would be reprocessing resulting in certain valuable by-products for which Florida was to be credited.

Perhaps the strongest and most compelling evidence that Florida as well as Westinghouse understood and assumed that the Turkey Point spent fuel would be reprocessed is established by the bargained price in the contract itself on which the parties agreed. The district court correctly stated the background for this part of the agreement:

> Florida's continued insistence on guaranteed fuel costs, for as long a period as possible, together with the extreme importance Westinghouse placed on obtaining the construction contracts, prompted Westinghouse's offer of a guaranteed ten year fuel cycle cost. This, of course, included the cost of uranium and the purchase and disposal of the spent fuel as a part of the fuel cycle.[47]

When the contract was signed, the parties included, as the district court found, that "the bargained for price per kilowatt hour [in contract] reflected the parties' anticipation that the fuel would be reprocessed." 517 F. Supp. at 455. It is difficult to imagine any scenario of negotiations and contracting that would establish more clearly and conclusively that not only Westinghouse but also Florida contemplated and contracted on

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47 517 F. Supp. at 444.

the "basic assumption" that the spent fuel would be reprocessed, whether done by Florida or Westinghouse, than that the price to be paid for performance under the contract was based on what the parties assumed to be the cost or profit realized from reprocessing the spent fuel discharged by the plants' reactors. After all, nothing in the contract was more important than the price bargained for. When the bargained-for price was understood to include as an integral part thereof the cost of reprocessing and the profit realized for the sale or use of the products resulting from the reprocessing, such reprocessing must be taken as a basic assumption of the contracting parties.

But the district court dismissed the clear evidence that reprocessing was a basic assumption of the contracting parties by declaring that the agreement on pricing represented merely "an expectation" and was not a "basic assumption" or a condition of performance, citing *American Trading*, *supra*, and *Transatlantic Financing*, *supra*, as sustaining its conclusion. We find it difficult to discern any similarity between this case and the two cited authorities. As we have already observed, both of the cited cases involved contracts of carriage by sea (from a port in Texas to a port in India in the case of *American Trading* and from a port in Texas to a port in Iran in *Transatlantic Financing*). The cases did refer to the fact that the "contemplated" route to be followed by the ships involved was the Suez Canal, but the decision in the cases did not turn on some tortured construction of the term "contemplation" but on the existence of a reasonable alternative available without excessive costs. When the Suez Canal was closed by the Israeli-Egyptian War, the shipping companies were forced to divert the ships to follow the well-known alternative Cape of Good Hope route. There was thus in both of these cases a reasonable long-used and accepted alternative for performance. In both cases, the ship charterer sued for the extra costs involved in the longer-than anticipated voyage around the Cape and lost because the Courts found that the increased costs of carriage were not excessive within the contemplation of the impossibility doctrine. This case is not in the least similar to those cases.

It is clear beyond dispute in ending the discussion of this part of the district court's reasoning, that it was a basic assumption of both parties—Florida and Westinghouse—that the disposal of the spent fuel would be effected by reprocessing, that in their negotiations leading up to the execution of the contract both assumed that the spent fuel would be reprocessed, that neither party doubted that reprocessing would be both feasible and available when they executed the contract and when performance under the contract would become due, that they based the bargained-for price to be paid Westinghouse on the basis of the cost of reprocessing, and that there were in the contract itself references to reprocessing. *See* Section 1(d), Section 18(b) ["actual performance will be determined from the results of isotopic analysis of the reprocessed fuel or in a mannner agreeable to Westinghouse and Florida"] and Section 24(c). This was essentially the district court's finding in its second opinion, as we have already said. If we were to apply the test stated by the Supreme Court in *Hogarth*, it would be proper to say that under these undisputed facts reprocessing was an "implied condition" of the contract, as that term was used in that case.

We are unable to distill from this record the slightest credible evidence that at the time this contract was executed both parties had not assumed (1) that reprocessing was a practical and available method for disposing of spent fuel, (2) that it was the method of disposal by which it was intended that, dependent on Florida's election under the option granted it, the party obligated would dispose of the spent fuel, and (3) that, if commercial reprocessing was not available on reasonable terms, the Government would reprocess the plants' spent fuel. Actually, neither the district court nor Florida seemed to take issue with but one of these conclusions.

The district court would find, however, that what the parties considered was commercial reprocessing facilities as a means of disposal, and it was *commercial* reprocessing that was uncertain and speculative in 1966 when the contract was signed. It rested this conclusion on its finding that the difficulties caused by the intervention of environmentalist groups in

the early 70s were "sufficiently foreshadowed in 1965 that a reasonable, informed person, or company, in the nuclear industry should have taken them into account." 597 F. Supp. at 1468. There is, so far as we can ascertain, no credible evidence in the record to support this finding. The only fact that the district court cites is that there was no commercial reprocessing plant in operation when this contract was signed. This finding is erroneous: NFS's plant began operations a month before this contract was signed. But this error is not important. The important fact is that no one knowledgeable (except possibly Gardner) in the nuclear field regarded commercial reprocessing as speculative or uncertain. Even Florida's head of its nuclear analysis department agreed with the district court's summation of the facts on the assumption in the nuclear and electric industry that

> [I]n the years—the late '60s and early '70s, up until the time somebody in Washington put the kibosh on all of it, that it was generally—the industry was generally enthusiastic about the prospects of reprocessing for several reasons: One, it was generally thought that it would be commercially feasible; and two, it was good because it was going to cut down on the amount of uranium that we were going to need.[48]

Beyond this, electric utilities other than Florida were erecting nuclear power plants all through the 60's. In fact, Florida contracted for another nuclear plant in 1967 or 1968, to be constructed by Combustion Engineering, in which Florida knew that reprocessing would be the method of disposing of that plant's spent fuel. *See* note 38, *supra*. Is it credible to assume that any of the utilities, including Florida itself, would have undertaken the construction of these expensive plants if they had thought that they would have been dependent completely on commercial reprocessing, which they reasonably should have foreseen at the time would be stymied by environmental complaints? Beyond that, it is incredible that Combus-

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48 Appendix, p. 514.

tion Engineering would have entered into a contract with Florida in 1968 if it had thought later environmental concerns "foreshadowed" the death of commercial reprocessing. Even more incredible is this assumption when it is noted that Exxon, Allied Chemical, Gulf Oil, and General Electric were all planning to enter the commercial reprocessing business in the 60's. We find in this record no credible evidence to support the finding that the woes of commercial reprocessing which developed in the 70's were foreshadowed in 1965.

But this entire argument rests on the assumption that Florida and all the other utilities that constructed nuclear power plants in the late 50's and 60's relied absolutely in their assumptions on the availability of commercial reprocessing. Certainly, the utilities that contracted for the construction of nuclear power plants during that period did not do so. The complete record of private nuclear electric power from 1957 on demonstrates conclusively that this was not so. Thus, there were no commercial reprocessing plants either in existence or planned in the late 50's when a number of these plants were begun. That is not to say that these utilities did not think that commercial reprocessing was practical and feasible, as Florida's own nuclear expert affirmed, and would probably develop. But the important fact is that these utilities, like Florida, had an assurance from the Government that, if commercial reprocessing did not become available on reasonable terms, the Government would provide reprocessing in its own plants. It was that assurance that was the basis of confidence on the part of the utility industry inducing the utilities like Florida to construct nuclear power plants in the late 50's and 60's. And that assurance was given, as we have always said, by the Government for the very purpose of allaying any fear by the utility industry of the availability of reprocessing as a means of disposing of the spent fuel.[49] Moreover, everything the Government did sup-

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49 While recognizing that the Government had actively encouraged the electric industry about reprocessing and had sought to induce the industry to construct plants, it had done so in order "to generate sufficient experience to

ported the assumption that reprocessing would be available in Government plants for these nuclear power plants if commercial reprocessing never became feasible and reasonable in charges. Accordingly, in 1963 when the AEC entered into an agreement with NFS incident to the constructing of the latter's reprocessing plant, the AEC had attempted to encourage NFS to construct that plant by assuring if it did not secure enough contracts from commercial nuclear power plants to permit full operation of the plant, the AEC would supply the necessary fuel for such operation by transferring to NFS's plant irradiated fuels received by it (AEC) for reprocessing from the commercial nuclear plants under its March 12, 1957, assurance. But it made it clear that the private nuclear power plants would not be dependent on the commercial reprocessing plants for it provided that if NFS's charges for reprocessing were shown to the utility to be unreasonable, the AEC would "accept the reactor operator's irradiated fuel under the March 12, 1957, *Federal Register* notice." AEC Report for 1963 at 54. No doubt commercial reprocessing was expected to be available but always the utilities assumed that they were protected by the Government's assurance, an assurance which the district court in its third opinion described as an "implied commitment." 597 F. Supp. at 1478. And it is the failure of the Government to carry out this commitment—an event neither Florida nor Westinghouse anticipated—that made it impossible for Westinghouse to carry out its obligation to dispose of the Turkey Point spent fuel. Such failure, it would seem, excuses

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enable AEC to evaluate whether or not nuclear power had practical value in this application." 597 F. Supp. at 1471. We find no evidence to support this supposition of Government intent nor are we persuaded that the AEC was engaged in duplicity in encouraging industry in this regard, or that it entertained doubt about reprocessing, either by it or by commercial interests. The Government, in giving its 1957 assurance, was acting on its assumption, joined in by all knowledgeable in the nuclear industry, that reprocessing of the spent fuel of the nuclear electric plants was practical and feasible both in government plants and in commercial plants which it was confident would arise.

Westinghouse's failure to perform. And this is specifically what the district court in another aspect of the case held.

After Westinghouse had failed to dispose of the Turkey Point spent fuel in 1975, it was established that the spent fuel could for several years be retained on site by increasing the reracking at the plant. Florida had completed some reracking. It sought repayment for this cost, claiming that the reracking was caused by Westinghouse's failure to dispose *timely* of the spent fuel. In partially absolving Westinghouse for this failure *timely* to dispose of the fuel, the district court in its third opinion justified its conclusion to this effect by finding first that "the Government did not act in a timely fashion in honoring its implied commitment regarding spent fuel" [*i.e.*, the assurance in the March 12, 1957, announcement] and then it said

> [T]his failure on the part of the Government was an unforeseeable contingency the non-occurrence of which was a basic assumption of the contract and which has rendered performance of Westinghouse's implicit timliness obligation to Florida impossible.[50]

It seems clearly illogical for the district court to excuse the failure of Westinghouse to dispose timely of the spent fuel on the specific findings that the Government failed to prepare under its "implied commitment" to provide reprocessing, if

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50 This assurance was renewed several times, the last being in 1970. But, as the district court correctly observed, this was a continuing assurance of the Government. This it said was so because "the principle underlying the earlier policies, *i.e.* that government would provide the necessary sources if the industry were unable to do so, remained in effect although the policy was not renewed." 597 F.2d at 1470. This ruling accords with the Government's own statement of its assurance as it put it in its contract with NFS as quoted in the AEC Report for 1963 at 54. There the Commission agreed to deliver to NFS "certain of the private fuels now on hand or expected to be received by the AEC pursuant to its March 12, 1957, *Federal Register* notice offering to accept irradiated fuels from licensees until June 30, 1967, *or until private processing services are available at reasonable charges*" (Italics added), if private utilities did not supply NFS sufficient fuel for reprocessing to permit reasonable operations.

reprocessing was otherwise unavailable,[51] and then not to make precisely the same findings in connection with Westinghouse's failure to dispose of the spent fuel by reprocessing. In our opinion, the result in the two situations demanded the same treatment. It therefore follows that Westinghouse is entitled to be excused of liability for failure to dispose of the spent fuel for impossibility of performance.

B.

In its second reason to deny relief to Westinghouse herein, the district court suggests that Westinghouse is foreclosed from claiming relief under the doctrine of impossibility/impracticability of performance because had it been more zealous it could have "removed" some, if not all the spent fuel, before 1977 and thus there was not at least partial impossibility/impracticability. It based this conclusion in its first opinion on its finding that the "unavailability of reprocessing or storage for Florida's spent fuel prior to 1977 is clearly attributable, at least in part, to Westinghouse's own less than zealous attempts to obtain a facility." 517 F. Supp. at 455. In its third opinion, the district court repeated its earlier finding "that Westinghouse failed to act diligently in the early 1970's to secure a reprocessing and/or storage facility for the Turkey Point spent fuel," and it repeated that finding by saying that "the unavailability of reprocessing or storage for Florida's spent fuel prior to 1977 [was] clearly attributable" to Westinghouse's less than zealous efforts to secure either reprocessing or storage. 597 F. Supp. at 1463.

The district court in its third opinion identified the way in which, in its opinion, Westinghouse could have, had it been diligent, secured either reprocessing or storage for the spent fuel prior to 1977. It opined that storage or reprocessing at

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51 The district court did charge Westinghouse with liability for one-half of the cost of reprocessing on the ground that Westinghouse could have disposed timely without the necessity of re-racking if it had been "zealous." We deal with this point in the next section of this opinion.

AGNS's facilities at Barnwell, South Carolina, could have been obtained had Westinghouse proceeded with greater "zeal." The district court explained its reasoning in this regard with this statement: "Had Westinghouse pressed its contract negotiations with AGNS more aggressively, or had it sought to enforce what its witnesses claimed was a lawful contract whereby AGNS agreed to remove and reprocess the disputed fuel, at least some of this space could have been made available to Westinghouse." In explaining its reasoning, just quoted, it is uncertain whether Westinghouse is being faulted for failing to obtain reprocessing services at AGNS's facility or to obtain storage at such facility. It seems from later language in the opinion that the district court assumed that Westinghouse could have secured storage for the spent fuel at AGNS's facility if it had acted more "aggressively." Thus, it said: "Indeed, the AGNS facility could conceivably have been expanded to serve as an AFR [offsite] storage facility for a much larger quantity of spent fuel, making space available for all of Westinghouse's spent fuel. . . . " It dismissed the argument that the AEC would not have licensed the site for storage, saying that the only reason the Commission "would [have done so was because it was] unwilling to license this expensive and environmentally costly option so long as the relatively cheap and easy alternative of re-racking at Turkey Point is available." Yet, after this statement, the district court added: "However, although the AGNS facility could conceivably have been expanded, the evidence suggests that any attempt to expand the AGNS facility into a full-scale AFR [*i.e.*, away from site] facility would have met intense and possibly insurpassable political opposition. . . . In this light, the Court is not prepared to find that Westinghouse could have forced AGNS to convert its facility to a full-scale AFR that could have accepted the Turkey Point spent fuel throughout the life of the 1973-1983 contract between Florida and Westinghouse. Nor is the Court prepared to find that Westinghouse could have built its own AFR to have served that purpose." Despite these positive findings, the district court concluded this aspect of its opinion with this declaration: "However, Westinghouse has not dis-

turbed the Court's 1981 finding that had Westinghouse acted with diligence, it could have removed some portion of the spent fuel to the existing storage space at the AGNS facility or to similar space at a number of other sites summarized in the expert's report."

It is difficult to follow this reasoning. At one point the district court faults Westinghouse for failure to store the spent fuel at the AGNS facilities, entirely disregarding the fact that before any such storage could be had AGNS would have had to be converted to storage for which it would have been required to secure an additional AEC license. Immediately following this, the district court stated that it was unprepared to find that such conversion (which, under the testimony of the AGNS witness, the AGNS was not interested in) could be accomplished. Similarly, it expressed unwillingness to find that Westinghouse could have built its own reprocessing or storage facilities. These conclusions were clearly demanded by the evidence. Until Florida made its election of Option C, Westinghouse could not be charged with want of diligence in planning to dispose of the Turkey Point spent fuel. This election was made informally in the fall of 1970 and formally in 1972. Had Westinghouse sought to construct a reprocessing or storage facility after 1970, a license from the AEC would have been required. AGNS at that very point had an application for a license to operate a reprocessing facility, and NFS had one to expand substantially its plant. Those applications were pending among the applications unacted on because of the complaints of intervenors, *see Natural Resources Defense Council*, *supra*, 539 F.2d at 832, and were involved in the proceedings in that case which dragged on until a decree in the fall of 1976 enjoining the granting of any application "for commercial licenses to construct or operate plutonium-related separation or reprocessing facilities, nor may it license commercial scale transportation or use of plutonium and uranium mixed oxide fuel" until a full environmental impact statement had been approved. 539 F.2d at 845-46. Shortly after this President Carter directed and the AEC entered an order terminating any grant of license for reprocessing or use of

plutonium and uranium mixed oxide. Manifestly, Westinghouse could not have secured a license to construct and operate a reprocessing facility at any point after 1970.

The picture for constructing an AFR storage facility was no more promising. The AEC itself had sought to develop such a storage facility in 1971. The political hailstorm that followed the announcement of such a plan forced the AEC to abandon the project. Another attempt in 1976 was equally futile. When the Government was unable to construct in the 70's such a storage facility, it is unreasonable to assume that Westinghouse could. It is obvious that there was no possible way Westinghouse, however diligent and alert it may have been, could in the period from 1970 or 1972 on have constructed a reprocessing or storage facility. Nor could it ever have secured reprocessing or storage at the AGNS facility. AGNS was never able to secure a license for its reprocessing facility and it never intended to convert its facility to AFR storage. The contrary conclusion of the district court is without any support in the record or, for that matter, in the findings of the district court itself.

Moreover, the charge of want of diligence on Westinghouse's part loses any weight whatsoever in the light of the evidence of Westinghouse's negotiations with AGNS for a contract to reprocess the Turkey Point spent fuel. In 1969, as a precaution in case Florida chose either Option B or C, Westinghouse entered into negotiations with AGNS for a contract to reprocess the Turkey Point spent fuel at AGNS's plant then under construction, and in the early 70's it had obtained a letter of intent to execute a contract for such reprocessing. Westinghouse made repeated efforts to translate this letter of intent into a firm contract without success. AGNS was unwilling to fix a price in the confused picture for reprocessing arising out of the various judicial attacks on reprocessing at that time and while its license application was caught up in the pending litigation. There is no evidence to support the assumption in the district court's opinions that Westinghouse might have secured a contract had it not been so slow in its negotiations. Actually, the party delaying any signing of a firm contract was

AGNS, and its reasons for such refusal were reasonable under the circumstances. Any charge that Westinghouse had been unable to secure reprocessing for the Turkey Point spent fuel because of a lack of zealous diligence on the part of Westinghouse is without any support in the record.

C.

Finally, the district court's opinion advances the point that Westinghouse, with the passage of the NWPA in 1982, acquired a means whereby it could remove all the fuel and dispose of it in government storage at what is not an impracticable cost. For this argument, it relies again on the decisions in *Transatlantic Financing*, *supra*, and *American Trading*, *supra*, dealing with an alternative means of performance. Both of those cases involved, as we have already observed, sea carriage from the East to the West, for which there are alternative routes: one through the Suez Canal; the other around the Cape of Good Hope. Obviously, carriage through the Canal would be shorter and less expensive for the carrier, and both parties to the contract of carriage could have expected to use the Canal route. However, the Canal was closed by the Israeli-Egyptian conflict, and the carriers were forced to carry their cargo by way of the longer route. The carriers sought to recover the extra cost on the ground that it was a basic, though unexpressed in the contract, assumption that carriage would be via the Canal, and the impossibility of performance under that basic assumption warranted recovery of the extra cost of the more expensive Cape route. The courts denied recovery, finding that the extra costs did not rise to a level authorizing the invoking of the doctrine of impossibility of performance. The increase in costs in *Transatlantic Financing* was but 16% and in *American Trading* less than 33-1/3%.

For the reasons already delineated, those cases are plainly different from this case. In those cases, there was *always* a foreseeable and reasonable alternative means of carriage of the cargo existing both at the time the contract of carriage was

executed and at the time peformance was called for. In this case, however, there was neither a reprocessing plant nor, for that matter, a storage facility available to Westinghouse subsequent to the time Florida elected to exercise Option C. Its only possible reprocessing facility was AGNS's facility at the time performance was in order—unlicensed and uncompleted. But that facility was never licensed and could never operate. Neither in 1970 nor at any time since have there been any AFR storage facilities available to Westinghouse for the storage of the spent fuel. Thus, this is an entirely different scenario, with tremendously increased costs of performance and with a means of performance not contemplated or intended by the parties from that presented in *Transatlantic Financing* and *American Trading*.

We do not, however, regard the promise of storage, as made by the Government under the Act of 1982, to represent a reasonable alternative to the reprocessing, the availability of which was, to use the district court's own characterization of the Government's 1957 assurance, an "implied commitment." Under the original governmental assurance, reprocessing was to be available when required, an event that occurred at least by 1975, and, as we have seen, both parties foresaw and assumed that the plants' spent fuel would be disposed of by reprocessing. Storage was not contemplated at the time, nor was it when the contract was executed, as the means of disposal.

Had reprocessing been available, Westinghouse would reasonably have realized a profit from disposing of the Turkey Point spent fuel. That fact is undisputed in the record. What is now offered Westinghouse as an alternative is a method of disposal which neither existed nor was even planned or considered by the parties when the contract was executed or when performance was due in 1975. Assuming the storage is finally provided, it would not only fail to yield a profit of some $18,000,000 to $20,000,000 to Westinghouse, as contemplated by the parties when this contract was signed, but would, if the district court's decision is affirmed, cost Westinghouse at least well over $80,000,000. The difference here is not 50% as the

district court reasoned but percentages in the hundreds range. We know of no case where the use of the alternative not only wiped out the expected profit but resulted in a loss some four or five times greater than the expected profit and that was not found to be so excessive as to justify the application of the impossibility doctrine. Further, the storage alternative is not presently available. The site for storage has not been selected. As the NRC has said, it may be as late as 2010 before storage is available and even that estimate is not firm but is subject to many contingencies. already specified. Certainly, storage was not available at any time during which Westinghouse had responsibility for disposing of the Turkey Point spent fuel (*i.e.*, from 1972, when there was first "initial criticality" to 1982, 10 years later).

The district court, however, would discount the cost of the storage alternative, assuming that storage can be sufficiently certain to represent an alternative. In its first opinion, the district court said that it could not find the extra cost of the storage excessive without considering the profit on the parts of the contract other than that for disposal. Westinghouse, at a hearing on remand, answered this argument of the first opinion by establishing that there was a loss on the other parts of the contract. In its third opinion, the district court proceeded to add the revenue received by Westinghouse for the plant ($222,000,000 approximately) and add to it the cost of the storage. It estimated that the cost of storage was not quite 50% of the combined total, which it would find was not an excessive cost under the impossibility doctrine. It then concluded that the cost of the alternative (*i.e.*, storage), when compared with the entire cost of the whole project, including plant construction, was less than 50% of the cost of the whole project.

We find this method of calculation improper. The only thing to be considered is the cost or profit to be realized by Westinghouse if reprocessing had been available compared with the cost of storage as an alternative to that method of disposal of the spent fuel. Under this scenario, a method of performance under which Westinghouse would have netted just less than twenty million dollars is to be compared with an

alternative which would have burdened Westinghouse with a *loss* of well over eighty million dollars. This, in our opinion, is the proper form of analysis in determining whether the cost of the supposed alternative is "excessive" within the meaning of the impossibility/impracticability doctrine. Under this analysis, it is obvious that the alleged alternative represents an unreasonable and excessive cost to Westinghouse. We, therefore, have no difficulty in holding that as a matter of law the promise of future storage in this case is not a reasonable alternative and that Westinghouse has established its right to be excused from performance of the obligation of disposal of the spent fuel under the defense of impossibility/impracticability. The separateness of the three parts of the contract is illustrated by the fact that this controversy involves only the contract for the disposal of the spent fuel; the controversy has nothing to do with the furnishing either of the plant or of the uranium to be used in the plants (unless the reclaimed uranium resulting from the reprocessing is considered, though Westinghouse's obligation to offer this uranium to Florida at the fixed price is not clear).

There is another reason for concluding that the cost of this promised alternative is too different in character to qualify as damages reasonable in an action for breach of contract and too "excessive" to meet the requirements for barring the excuse of impossibility of performance as a reasonable alternative form of performance under *Transatlantic Financing* and *American Trading*. This reason was suggested by the district court in its second opinion and is based on the long-established principle stated in *Hadley v. Baxendale*, 9 Exch. 341, 156 Eng. Rep. 145 (1854), and now incorporated substantially in Section 351 of the Restatement (Second) of Contracts. As phrased in *Hadley*, the principle is:

> Where two parties have made a contract which one of them has broken, the damages which the other party ought to receive in respect of such breach of contract should be such as may fairly and reasonably be considered either arising naturally; *i.e.*, according to the usual

> course of things, from such breach of contract itself, or such as may reasonably be supposed to have been in the contemplation of both parties at the time they made the contract as the probable result of the breach.

This principle has been accepted as controlling in breach of contract cases in both federal and state courts, including those of Florida where this contract was to be performed. *T.D.S., Inc. v. Shelby Mutual Ins. Co.*, 760 F.2d 1520, 1531 n.11 (5th Cir. 1985) (decided under Florida law).

Of course, any costs of obtaining reprocessing elsewhere than from Westinghouse would have been damages arising from a breach "in the ordinary course of events" and reasonably foreseeable by the parties. But costs of long-term storage of the spent fuel were not damages that either party to this contract—either Westinghouse or Florida—had any reason "to foresee as a probable result of the breach when the contract was made." Moreover, the parties always contemplated that there would be a "substantial" profit in disposing of the spent fuel. Storage, on the other hand, offered no opportunity of a profit. As we have already noted, what the parties foresaw "as a consequence of the breach" was at the most some decrease in the value of plutonium, with a consequent reduction in the profit of the processor. That was the "natural" and "ordinary course of events." Neither party foresaw that reprocessing would be completely unavailable, that the Government's "implied commitment" to reprocess would be abandoned, and that, after years of waffling, the Government would impose on all nuclear power operators the requirement that they should pay the Government substantial storage fees for the storage of this spent fuel in a facility that at best will only be available so far in the future that by that time these plants will have completed their operating life. This certainly is not what the parties contemplated or intended when this contract was signed.

We think the situation in this case fits completely into the requirements stated in both *Hadley* itself and the Restatement. We are unable to follow the distinction that the district court

seeks to make between "loss" and "damage" and between "kind" and "amount" of damages as applied to the facts of this case and thereby find *Hadley* on point here. The question under *Hadley* was whether the "kind" of loss which occurred was one contemplated by the parties when they signed the contract. Unquestionably, loss resulting not from reprocessing but from storage, which neither party foresaw, was not the "kind" of loss foreseen by the parties in 1966 as a possible result of the breach of contract. Damages resulting from such a "kind of loss" are the damages which are not recoverable under *Hadley*. This is, therefore, another reason for concluding that the district court incorrectly dismissed the rule in *Hadley* as applicable in this case.

We, accordingly, find that the three objections to the plea of impossibility of performance, stated by the district court, are without support in the record. On the other hand, we find the record completely establishes that Westinghouse had proved every element of an impossibility defense as stated by us in *Opera Company* and the reasons assigned by the district court for finding to the contrary are without any credible support in the record.

VI.

The determination that Westinghouse has made out its defense of impossibility of performance does not, though, dispose of the case. Since the doctrine is in essence an equitable defense, as the district court in its second opinion recognized, it is necessary that we consider the equities of the parties. The district court did this in its second opinion. It held that it would be equitable to impose this expense of storage on the ratepayers of Florida, who were the great beneficiaries of the Turkey Point nuclear plants. Over the expected life of the plants, the ratepayers would realize a saving in their electric costs of some eight billion dollars, and for the period for which Westinghouse was obligated to dispose of the spent fuel, a saving of just under two billion dollars. It seemed fair to assess the relatively insubstantial costs of storage against these tre-

mendous savings rather than upon Westinghouse which was the victim of the Government's failure to carry out its "implied commitment." The Congress has recognized that such a result is fair and recommended in its report on the 1982 Act that these unforeseen costs should fairly fall on the ratepayers of the utility which enjoyed the benefits of the lower costs of the nuclear plants. Prior to that President Carter had, in his termination of reprocessing and order for the construction of permanent long-term storage for spent fuel, recommended this same result. Moreover, the Florida Public Service Commission has given Florida this form of relief for the 20 years of the plants' expected life because of the unavailability of processing. There is no reason in fairness or justice why Westinghouse should not receive the same consideration and relief as was given Florida by the Commission. And the district court in its second opinion did precisely this.

In its third opinion, the district court refused to provide that the cost of the storage for the initial ten years of the plants' operation that Westinghouse was obligated to dispose of the Turkey Point fuel should be recovered through a charge against the ratepayers. It sought to justify this result on a short, inconclusive colloquy on the floor of the House during the consideration of the 1982 Act. There was in the colloquy no discussion of any reason to make any distinction between the justice of absolving Florida and not absolving Westinghouse. Both Florida and Westinghouse had intended that the spent fuel would be reprocessed, netting a profit to whichever one did the reprocessing; both had relied on the Government's assurance, which the district court described as an "implied commitment." The equities in favor of Westinghouse are thus the same as those in favor of Florida. We conclude that it is equally fair to impose the costs of storage for the spent fuel discharged during the initial ten-year period of the plants' operation (when Westinghouse was to dispose of the spent fuel) on the ratepayers as it was to impose on them the costs of the twenty-year period during which the obligation of disposal rested on Florida, and we find the district court properly assessed the costs of the storage on the ratepayers for

the initial ten-year period under the contract in its second opinion. We agree with the result in this regard reached by the district court in its second opinion which found that, under the undisputed record, the costs of storage for the first ten years of the plants' operation should fall on the ratepayers of Florida.

Accordingly, we hold that Florida is not entitled to recover from Westinghouse the cost of future storage in a Government storage facility, to be hereafter built, for the spent fuel discharged by the Turkey Point nuclear power plants for their initial ten-year period of operations. The judgment of the district court in its third opinion in assessing such costs against Westinghouse is reversed. In reaching this conclusion we are aware that in all probability Florida will be permitted to recover its costs from its ratepayers. This result is consistent with the views expressed by Congress and President Carter. It is also consistent with the judgment of the Florida Public Service Commission with respect to the cost of storage after the initial ten-year period. Since neither Westinghouse nor Florida has appealed the judgment dividing the costs of the reracking between Florida and Westinghouse, that part of the decision and judgment of the district court is affirmed.

AFFIRMED IN PART
and
REVERSED IN PART.

APPENDIX B

Opinion on Liability of the United States District Court for the Eastern District of Virginia

IN THE UNITED STATES DISTRICT COURT

FOR THE EASTERN DISTRICT OF VIRGINIA

RICHMOND DIVISION

MDL-235

Civil Action No. 75-1677-R

IN THE MATTER OF:

WESTINGHOUSE ELECTRIC CORPORATION
URANIUM CONTRACTS LITIGATION

FLORIDA POWER AND LIGHT COMPANY,

Plaintiff,

—v.—

WESTINGHOUSE ELECTRIC CORPORATION,

Defendant.

MEMORANDUM

The instant issue arises out of an alleged breach by the defendant Westinghouse Electric Corporation (Westinghouse) of a contract executed by the parties in May of 1966 with an effective date of November 15, 1965, for the long term fueling of two nuclear steam supply systems manufactured by Westinghouse for the plaintiff corporation. The contract in issue was entered into as a consequence of plaintiff having, in the

same year, agreed to purchase from defendant two nuclear steam supply systems for the generation of electric power.

Plaintiff Florida Power and Light Company (Florida) is a corporation organized and existing under the laws of the State of Florida, with its principal place of business in Dade County, Florida, engaged as a public utility for the generation, transmission, distribution and sale of electric energy.

Westinghouse is a multinational diversified corporation organized and existing under the laws of the Commonwealth of Pennsylvania with its principal place of business in Pittsburgh, Pennsylvania.

The amount in controversy exceeds, exclusive of interest and cost, the sum of $10,000. Jurisdiction is premised on 28 U.S.C. § 1332(a).

Florida seeks, in addition to monetary damages, an order requiring Westinghouse to comply with Section 27(a)(2) of the contract of May 1966 which reads as follows:

> Section 27. Scope
>
> (a) Westinghouse will:
>
> (1) . . .
>
> (2) Remove the irradiated fuel from the plant site and dispose of it as Westinghouse sees fit. . . .

On September 2, 1975 Westinghouse advised Florida by letter[1] that it had no plans to remove the irradiated (spent) fuel[2] from Florida's plant site, and this lawsuit followed.

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1 A letter dated September 2, 1975 from John Rolin of Westinghouse to J.E. Carson of Florida reads as follows:

> Westinghouse shares the concern, expressed in your letter of June 10, 1975, regarding the removal of spent fuel from Turkey Point.
>
> The schedule for removing and reprocessing the Turkey Point discharged fuel is, of course, dependent on the Allied-General Nuclear Services (AGNS) reprocessing facility schedule. Although West-

(*Footnotes 1 and 2 continued on next page*)

The evidence reveals that in 1965 the nuclear industry was at an early stage in its evolution. In 1964 legislation had been enacted permitting, for the first time, private ownership of uranium, a necessary component of nuclear power. The sale of nuclear steam supply systems was in its infancy, and Westinghouse, a manufacturer of such systems, was most anxious to enter into a contract with Florida for its proposed plants designated as Turkey Point Units 3 and 4, located in Dade County, Florida. At the time, there were no nuclear plants operating in the south. Additionally, the opportunity was unique; for Florida contemplated the construction of two power plants at the same location. It was during a period when fossil fuels were relatively inexpensive, capital costs were down, and adequate gas, oil and other fuels were available. While the potential for nuclear powered plants for the production of electricity was considered bright, reactor sales were not abundant and few negotiations for nuclear power plants were in progress. Additionally, in the view of many, uncertainty existed during the period of 1965-66 as to whether nuclear power could compete economically in most areas of the country with fossil fuels.

The securing of a contract by Westinghouse with Florida for the sale of two pressurized water reactors was viewed by Westinghouse not only as a vote of confidence, but as an incentive for other utilities to seriously consider the use of nuclear power.

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inghouse has had recent discussions with AGNS, major uncertainties still exist which make it impossible to establish the long-range plans you inquired about.

At this time, therefore, Westinghouse has no plans for removing the spent fuel from the Turkey Point site. We will keep you informed as to any changes in this situation.

. . .

2 Irradiated fuel is fuel which has been used or spent in a reactor core. The fuel is contained in assemblies, *see* n.3, and stored, for purposes of cooling, in water filled storage pits, prior to being moved from the site.

Florida, at the time, had no expertise in nuclear power, a fact well known to Westinghouse. Indeed, in March of 1965 Florida notified Westinghouse that it (Florida) lacked the manpower and knowledge needed to develop specifications and evaluate proposals for a nuclear plant. This lack of expertise resulted in Florida's continued insistence on the purchase of a complete package with a guaranteed maximum price. The evidence further reflects that Westinghouse actually encouraged Florida to rely on Westinghouse's professed nuclear knowledge and capability.

Ironically, Westinghouse was aided in inducing Florida to enter into the contracts by the fact that General Electric, a principal competitor, was also proposing that Florida convert to nuclear power, and in this effort provided much economic analysis tending to show its advantages. The competition between General Electric and Westinghouse was keen, and the form of Westinghouse's offer to Florida was influenced by its knowledge of General Electric's proposal. Westinghouse concluded that the form of its fuel offer, though not as it would have chosen in the absence of its knowledge of General Electric's position, was necessary in order to secure the contract. Coupled with this incentive was Westinghouse's knowledge that Florida's chief executive officer had expressed the view that the successful manufacturer of the contemplated units would have to assume responsibility for total fuel supply. He expressed the view most vividly in the following language:

> I do not want to buy a sheep to get a suit of clothes, and have the sheep sheared, dyed, treated, woven into cloth, cut, and sewn into a suit. I want to buy a suit, not go through all the procedures of having to acquire the wool that goes into the suit, nor the manufacture of the thread, nor the material or anything else. I want to buy a suit already made.

Florida's continued insistence on guaranteed fuel costs, for as long a period as possible, together with the extreme importance Westinghouse placed on obtaining the construction contracts, prompted Westinghouse's offer of a guaranteed ten year fuel

cycle cost. This, of course, included the cost of uranium and the purchase and disposal of the spent fuel as a part of the fuel cycle.[3] In short, Florida expressed a consistent desire to look at a complete package.

The cost assumptions upon which Westinghouse predicated its proffered fuel contract were based on what one witness described as "very little knowledge". In its contract with Florida, Westinghouse agreed to a contract price fixed solely by reference to the amount of electricity generated by Florida, and independent of the cost to Westinghouse of the purchase or disposal of uranium. Joseph Rengel, who was principally responsible within the Westinghouse organization for developing the terms of Westinghouse's fuel proposal to Florida, quite candidly testified that under the mills per kilowatt hour formula used in the contract between the parties, the risks taken by Westinghouse encompassed "the reprocessing of the fuel at

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3 A brief description of the fuel cycle follows.

Enriched uranium in a gaseous state is transported in cylinders to a fabrication facility where the fuel is fabricated into fuel assemblies, which among other processes, consists of converting the enriched hexaflouride to a ceramic powder known as uranium dioxide, which is then pressed into pellets typically 1/4 of an inch to 1/2 inch in diameter, and approximately 1/2 to 1 inch in length. These pellets are then placed into long, thin-walled rods of a length of 12 1/2 or 13 feet with a diameter of approximately 1/2 inch.

These rods in turn are then placed in a square-pitch array consisting of a precise number of rods in a precise number of rows. The rods are held together structurally by grids at 6 or 7 axial locations along the 12 foot high assembly. These assemblies are then, during reactor refueling, placed in a vessel designated as a reactor core assembly.

In the instant case, 157 fuel assemblies are contained in the reactor core of each unit, and currently 40 spent fuel assemblies are generated each year by each of Florida's reactors.

The initial core of a reactor consists of all new or fresh fuel assemblies, as contrasted with a reload core wherein only a portion of the fuel assemblies are fresh.

Experience has shown that the most economical utilization of nuclear fuel has been to change only a portion of the assemblies at each refueling. The removed or spent fuel assemblies are then usually placed in water storage pools.

Contained in these spent fuel assemblies is not only much uranium, but plutonium as well, which is recovered during the reprocessing procedures.

the end of the project". Mr. Rengel's explanation for Westinghouse's assumption of the risks inherent in a long term, fixed price fuel contract was that Westinghouse assumed "that the risks were not very significant". Indeed, the evidence reflects that it was not until after the contract had been executed that Westinghouse examined in detail the fuel cycle, consisting of enrichment, conversion and reprocessing.[4]

Under the provisions of the contract, Florida had the right until "initial criticality" to elect one of three fuel purchase options. Initial criticality occurred at Turkey Point Unit 3 on October 20, 1972 and at Turkey Point Unit 4 on June 11, 1973. Under the option timely selected by Florida, option C, which includes the contested Section 27(a)(2), Westinghouse is required to furnish fuel until each plant goes off the line or "the first refueling after ten years from the date of initial criticality". Under that option Florida's obligation to pay for the power generated by the fuel it received began with "initial criticality", which is defined as the first time a self-sustaining chain reaction occurs in the core of a nuclear unit. It is a moment that may be determined with technical precision. It is an event which occurs only once in the life of a nuclear unit.

In its negotiations, Westinghouse endeavored, unsuccessfully, to convince Florida that its fuel cost would be lower if it undertook on its own to have the spent fuel reprocessed.

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[4] Irradiated, or spent fuel contains valuable fuel material. After the spent fuel has cooled for three or four months, it is loaded underwater into heavily shielded casks. These lead-lined casks are used to transport the fuel to a chemical reprocessing plant. At the reprocessing plant the fuel is unloaded into another underwater storage pool.

The first step in reprocessing is to transfer the fuel from the storage pool to a cell where the assembly can be mechanically disassembled. After the end fittings have been removed, the fuel rods are sheared into short pieces. These pieces are placed in a dissolver where nitric acid selectively dissolves the fuel and leaves the cladding. The resultant fuel-bearing acid solution is treated by solvent extraction to separate the uranium and plutonium from the fission products. The uranium and plutonium are then subjected to further solvent extraction steps to purify them and remove nearly all of the fission products. Final products of the reprocessing are uranium and plutonium nitrate solutions.

Indeed, at one point Westinghouse offered to act as Florida's agent in obtaining reprocessing. Florida never seriously entertained these suggestions, by virtue of its negotiator's insistence that it wished to purchase a complete package.

In view of the infancy of the commerical market in uranium at the time of the negotiations with Florida, Westinghouse had no way of determining whether the wholesale price index would be an accurate measure of increases in the price of uranium, yet it agreed to a specified price[5] in reference to the cost to Florida for fuel based upon mills per kilowatt hour as a charge for the energy generated.[6]

Westinghouse had full knowledge of Florida's hesitancy to use nuclear power but ultimately convinced Florida that the capital, fuel, and production costs of nuclear power would not exceed the costs that it was incurring for its fossil units, and would inure to the benefit of Florida's rate payers. Under the option which it exercised, if spent fuel were not reprocessed, Florida ran little risk, and though the parties contemplated that Westinghouse would remove the spent fuel and reprocess it, the contract by its terms requires Westinghouse to remove the spent fuel and "dispose of it as Westinghouse sees fit". Indeed, no witness for either party ever viewed Westinghouse's contractual obligation as encompassing a reprocessing of the irradiated (spent) fuel.

Reprocessing is, according to those knowledgable in the nuclear power industry, the appropriate method of disposing of spent nuclear fuel. Absent reprocessing, spent fuel is not only valueless, but represents a financial burden.

It is obvious to the Court that Westinghouse took a calculated risk in providing the guarantees demanded by Florida. Included in those guarantees was Westinghouse's obligation to

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5 The parties ultimately agreed to a rate of 1.7 mills for each kilowatt hour of electricity generated, which was the basis for fuel payments by Florida, as calculated by Westinghouse, without specifically relating to Florida the components encompassed therein.

6 The contract called for a 10% ceiling on an escalated scale until October 21, 1977 in reference to Turkey Point Unit 3 and a similar one until June 12, 1978 as to Turkey Point Unit 4.

remove the spent fuel. To a great extent Westinghouse's willingness to accept the risks involved was premised on its understandable desire to enter into a contract for the building of Florida's nuclear reactors. Additionally, a not insignificant consideration was that Westinghouse anticipated that the reprocessing of the spent fuel, with its consequent recovery of uranium nitrate and plutonium nitrate, would result in a financial gain to it of between sixteen and nineteen million dollars, as the estimated value of reusable uranium and production of plutonium. While the given dollar value was simply an estimate on the part of Westinghouse, unsupported by hard evidence or reference to sources with a background of precise costs or values, the Court is satisfied that Westinghouse in its business judgment concluded that there was substantial value to it in reprocessing. Of necessity, the contract price also encompassed a charge to Florida for Westinghouse's anticipated service in removing the spent fuel.

The Court concludes that while both parties understood that Westinghouse intended to reprocess the spent fuel if it would inure to Westinghouse's benefit, that fact, excepting for its effect on the price Westinghouse offered to charge for the energy which Florida was purchasing, had no influence on Florida's executing the contract.

The only reference to reprocessing in the final contract is a provision permitting Westinghouse to use "plutonium and reprocessed or depleted uranium in fuel loadings subsequent to the initial fuel loading. . . ."[7]

Florida, unwilling to tie itself to reprocessing, was told by Westinghouse that as a consequence it was committing to pay a higher price for its fuel. In this regard, Westinghouse pointed out to Florida that it was its view that Florida's cost would be less if it would reprocess the spent fuel; for reprocessed fuel, which under the contract Westinghouse had the right to use in Florida's reloads, was contemplated to be less expensive than mined uranium. Nevertheless, Florida rejected a risk factor

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[7] Reference to reprocessing is contained in options A and B, which were not selected by Florida.

which Westinghouse was willing to take. The most logical conclusion in light of the nature of the negotiations is that Florida viewed Westinghouse's willingness to remove and dispose of the irradiated or spent fuel as inuring to Florida's benefit in the cost of energy and the completion of the "suit of clothes". That Westinghouse contemplated reprocessing, in light of its statements to Florida reference the beneficial economics of same, was simply viewed by Florida as a factor to which Westinghouse gave more weight than Florida was willing to, especially in view of Florida's desire to have the limits of its responsibilities and concomitant costs precisely defined. As one of counsel suggested, Westinghouse was, at least as to any risk factors, simply "out-negotiated". The Court finds no evidence which would support a conclusion that the parties ever understood or intended that Westinghouse be contractually obligated to reprocess the spent fuel. One would be hard pressed to construe the phrase " . . . dispose of it as Westinghouse sees fit" as imposing a duty to reprocess.

Admittedly, although the possibility was present in the contract, Westinghouse, having offered three options to Florida, had no way of knowing until Florida selected option C in 1972 that it, Westinghouse, would in fact have responsibility for removal of the spent fuel.

Option A of the contract would have foreclosed any responsibility on the part of Westinghouse to remove the spent fuel—options B and C placed that responsibility on Westinghouse.

Under the terms of the unaccepted options, reprocessing would have had a direct calculable affect on the cost to Florida. Florida concluded, however, that while its cost might be lower, reprocessing of spent fuel, which had never been done on a commercial basis, was too speculative, and while it agreed that Westinghouse could use reprocessed fuel in the Turkey Point plants if it chose to do so, the cost to Florida under option C was unaffected.

There can be no doubt but that at the time of the execution of the contract Westinghouse's primary interest was to build the nuclear reactors for Florida, with its concomitant boostering effect for the nuclear industry.

While, as the Court has concluded, both parties contemplated reprocessing, the fact remains that Westinghouse accepted the responsibility of removing the spent fuel and with that responsibility, to utilize that fuel as it saw fit. Its reliance on its own business judgment cannot in fairness impose on Florida greater burdens than it contracted for, absent what might be imposed by law, to which the Court addressed itself, *infra*.

That Westinghouse anticipated a monetary value is obvious. That Westinghouse took a calculated risk is just as obvious. No spent fuel had ever been commercially reprocessed as of the time of execution of the contract, and further, the first commercial reprocessing plant in the United States was not licensed until April 19, 1966; more than a year after negotiations between the parties had commenced. Additionally, Westinghouse fully understood that its offer to Florida was premised on what it deemed to be a reasonable business risk that commercial reprocessing would come to pass and would be economically feasible, conditions which had not, at the time of execution of the contract, been demonstrated. Florida, on the other hand, had its "suit of clothes" and had no financial interest in the spent fuel.

In short, Westinghouse was, in its eagerness to construct the power plants, willing to accept risks which Florida was not willing to take.[8] That Westinghouse fully appreciated this fact is evidenced by a Westinghouse proposal of November 3, 1965,

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8 An internal document of Westinghouse designated as its Atomic Power Division Five Year Business Plan, dated May 1966, contains the following statement which the Court views as buttressing its conclusion that Westinghouse deliberately accepted risks premised on assumptions, not under its control, in order to secure the nuclear plant contract with Florida:

> 1. *Long Term Fuel Contracts*
>
> APD is evaluating in detail the desirability of promoting and/or acceptance of long term fuel contracts, including the supply of uranium. The basic APD position, to date, has been to quote these contracts only if it appeared to be a necessary condition for obtaining a nuclear plant award. This "somewhat negative" approach is now under review by APD. The approach followed in the past was adopted

which would effectively have placed responsibility for spent fuel on Florida, as well as the fact that other written suggestions of Westinghouse making references to "reprocessing" were not incorporated into option C of the final contract. Florida simply refused to tie its cost to what it deemed at the time to be uncertain technology.

Except for eighteen spent fuel assemblies which Westinghouse arranged to be removed and which were sent to a governmental agency for experimental programs, Westinghouse has not removed the spent fuel, and as a consequence Florida at time of trial was storing 411 spent fuel assemblies.

The evidence discloses that over the life of the contract a total of 981 spent fuel assemblies will be generated. While no schedule for the removal of the spent fuel is set out in the contract, the Court finds that it was the intention of the parties that same be accomplished within six months to a year after the spent fuel is removed from the reactors, and as a consequence of Westinghouse's failure to remove same, Florida was compelled to expand its spent fuel storage pits to accommodate excess spent fuel.

Florida had, in anticipation of both temporarily storing spent fuel assemblies and in the event a problem occurred in the reactor vessel requiring an unloading of an entire core of fuel assemblies, caused to be constructed a storage pit for each reactor, each capable of holding 217 assemblies. The original expectation was that the pits would be sufficiently large enough to handle not only the anticipated annual discharge, but emergency unloadings as well. Each pit was intended for interim, temporary storage for the period between the time the fuel was taken out of the reactor and the time it was cool enough to be removed from the plant's site by Westinghouse.

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in order to minimize risk, and to have a customer's decision to buy or not buy from Westinghouse based on factors under our control. With the broader scope, APD could win or lose a job because of assumptions made relative to the cost of uranium, toll enrichment, reprocessing, etc., items of cost not under Westinghouse control.

Had Florida not expanded its spent fuel storage pits, its operation of the nuclear units would have had to cease.

As a consequence of Westinghouse's refusal to remove the spent fuel assemblies, Florida has expended $9,473,242.04 in reracking—that is, adding additional spent fuel storage racks at a closer center-to-center spacing which permits each pit to have a larger capacity than contemplated in the original design. This of course has resulted in increased operating and maintenance costs, as well as potential environmental difficulties.

It is estimated that by the end of the year 1985 both storage pits will reach their potential capacity for storage. If such comes to pass, Florida's reactors will be forced to shut down with a consequent cost estimated to be approximately $500,000 per day, per unit, for replacement power.

While the government has announced plans to provide an interim storage facility during the 1980's, no capacity for a final disposal facility has been demonstrated, nor indeed is there any certainty that even the interim storage facility will come to pass.

Florida chose what it deemed to be a fixed cost contract and as a part thereof, Westinghouse was to remove the spent fuel and dispose of it as Westinghouse saw fit. That conclusion, in the Court's view, is unassailable.

Finally in this regard, it can be said that the evidence reflects that Westinghouse's entry into the contract came about at a time when Westinghouse fully anticipated, despite the lack of a binding contract for reprocessing of spent fuel, to reprocess Florida's spent fuel with the hope of making its agreement with Florida under option C economically more profitable. Such anticipation was, however, just that—an anticipation fueled by its desire to secure the contract for the building of two nuclear steam supply systems and its own enthusiasm for its view of the merits and future of nuclear power.

Regardless of how one views the business judgment of Westinghouse in this regard, the fact is that, as early as 1957 the United States Atomic Energy Commission adopted a policy of assuring the nuclear power industry that the government would, in the event that commercial reprocessing services were

not available at reasonable times and conditions when irradiated power reactor fuels were discharged from their reactors, make financial settlement for the materials contained in those fuel elements, and reprocess them. Indeed, in 1965 the Government was actively urging reprocessing of spent fuel, was accepting fuel for reprocessing, and to a limited extent was underwriting a portion of the financial burden associated therewith. Notably, however, at that period in time the uranium was leased by the government and was in fact government material.

As a consequence of this policy of encouragement, reiterated in January of 1968, a number of companies expressed interest, and at least one, National Fuel Services, Incorporated, built a plant which became operational in 1966, and operated until 1972.

It is to be noted, however, that the plant which became operational in 1966 was designed to operate at only about 300 tons per year. It is estimated that the Turkey Point plants will produce about 400 tons of spent fuel over the term of the contact with Westinghouse. Other companies, such as General Electric, which had expressed an interest in commercial reprocessing services, abandoned their plans.

Events occurring after formation of the contract, however, made Westinghouse's plans to reprocess—rather than merely remove—and dispose of Florida's spent fuel more difficult to accomplish than Westinghouse had anticipated. After the start of the small NFS reprocessing plant in 1966, no other commercial reprocessing concerns became operable. In 1970, four years after the execution of the contract, Westinghouse entered into a letter of intent with Allied-General Nuclear Services (AGNS), to contract with AGNS, subject to AGNS's receipt of a license, for the reprocessing of the Turkey Point spent fuel. At the time of the letter of intent, AGNS was not licensed to reprocess nuclear fuel; nor is it now. AGNS never executed a formal contract with Westinghouse, and in fact, in early 1974 AGNS advised Westinghouse that it was not prepared to execute a formal agreement. On September 2, 1975, Westinghouse notified Florida by letter that Westinghouse had no

plans for removing the spent fuel from the Turkey Point site. Westinghouse assigned as its reason for not removing the spent fuel, the fact that the schedule for removing and reprocessing the discharged fuel was "of course, dependent on the Allied-General Services' reprocessing schedule".

No stretch of the imagination nor the arguments of ingenious counsel could satisfy the Court that, regardless of whether reprocessing was an integral part of the contract, Florida ever agreed to condition Westinghouse's obligation to remove the spent fuel on "Allied-General Nuclear Services' (AGNS) reprocessing facility schedule".

In April 1977, two years after Westinghouse declared its unwillingness to fulfill the contract, President Carter, by Executive Order, precluded the development of domestic facilities for the commercial reprocessing of nuclear fuel and the exportation of nuclear fuel for reprocessing purposes. As a consequence of the presidential ban on reprocessing, licensing procedures for contemplated commercial reprocessing facilities have been terminated.

Two years after Westinghouse's breach, occurring because of its own failure to successfully negotiate a contract for the removal and storage of the spent fuel, or alternatively to have utilized the period between the date of Florida's exercise of Option C and its breach in 1975 to make other arrangements, the government's change of policy thwarted Westinghouse's hope for reprocessing. As a consequence of the ban on reprocessing, Westinghouse contends that it is faced with an effective bar to removal of the spent fuel.

Inexplicably, though Westinghouse introduced evidence to the effect that it and AGNS had reached a finalized agreement reference the removal and reprocessing of the spent fuel as early as March 1973, no action was taken, nor has any since been taken, by Westinghouse, to enforce what it contends was its contract with AGNS. The Court concludes that no action has been taken in this regard because of Westinghouse's conclusion that any such action would fail.

Absent excuse by law, justice requires that Florida not be unduly penalized for having been forced as a matter of commercial necessity brought about by Westinghouse's failure, to expend millions of dollars in expanding its storage pits.

This, however, does not end the case. Florida seeks not only monetary damages as compensation for its having to expand its storage pits, but an order directing Westinghouse to remove the spent fuel.

The evidence does reflect that as a consequence of the presidential ban on reprocessing, licensing procedures for contemplated commercial reprocessing facilities have been terminated. There are, however, a number of facilities, including AGNS' Barnwell, South Carolina facility, where subject to appropriate licenses, spent fuel could be stored and perhaps ultimately reprocessed.

Finally in this regard, there are no commercial facilities, excepting for a few such as that of General Electric, which, because of the ban on reprocessing, has limited the use of its facility to taking spent fuel from its customers as an accommodation in lieu of being able to fulfill reprocessing commitments, that could be used for storage of spent fuel. Though there are eight government facilities with potential for storing spent fuel, which, theoretically, could store spent fuel produced beyond the year 2000, they would require extensive physical modifications to make them usable.

While there is now legislation pending to permit the U.S. Department of Energy to proceed to provide storage facilities, even if enacted, such facilities would not be available for a number of years.

It would appear that in the absence of a reversal of the government's policy against reprocessing or alternatively, facilities for the storage of spent fuel, if not presently available, becoming available, Florida's nuclear Turkey Point plants will be shut down by the year 1986 as to one plant, and 1988 as to the other.

LEGAL ISSUES

Westinghouse raises the following five defenses: (1) that its nonperformance is excused by the common law doctrine of impossibility of performance; (2) that the government's change of policy concerning commercial reprocessing discharges its duty under the force majeure clause; (3) that performance by it has been rendered commercially impracticable under § 2-615 of the Uniform Commercial Code; (4) that the non-availability of reprocessing has frustrated the purpose of the contract; and (5) that the parties' erroneous expectation that the spent fuel would be reprocessed discharges Westinghouse's obligation under the doctrine of mutual mistake.

Both in conceptual terms and in terms of the facts to which they relate there is considerable similarity among the defenses, particularly defenses 1, 3, 4, and 5. Commercial impracticability under the UCC is basically a codification of the common law doctrine of impossibility of performance, which, in turn, is grounded in the doctrines of mutual mistake and frustration of purpose. The purpose of each of the defenses is to

> . . . discharge an obligor from his duty to perform a contract where a failure of a basic assumption of the parties produces a grave failure of the equivalence of value of the exchange to the parties. And all [of the defenses] are qualified by the same notions of risk assumption and allocation.

Aluminum Co. of America v. *Essex Group, Inc.*, 499 F. Supp. 53, 70 (W.D. Penn. 1980). The burden of proving the elements of each of these defenses is on the party seeking to avoid performance. *Ocean Air Tradeways, Inc.* v. *Arkay Realty Corp.*, 480 F.2d 1112, 1117 (9th Cir. 1973).

The bulk of the Court's analysis will proceed under the two most similar of the claimed defenses, common law impossibility and commercial impracticability under the UCC. The United States Court of Appeals for the Fourth Circuit has held that because the UCC did not become effective in Florida until January 1, 1967, its provisions govern only part of the contract

in dispute. *Florida Power & Light Co.* v. *Westinghouse Electric Corp.*, 579 F.2d 856 (1978). However, in light of the fact that the Florida Comments to the UCC indicate that the commercial impracticability provisions of the UCC merely codify the pre-code common law of impossibility of performance, the Court believes that its consolidation, for purposes of analysis, of the two defenses is fully consonant with the Fourth Circuit's holding. *See Florida Power & Light*, 579 F.2d at 863.

I. *Commercial Impracticability*

Fla. Stat. 672.615 (excuse by failure of presupposed conditions) provides, in pertinent part:

> Except so far as a seller may have assumed a greater obligation and subject to the preceding section on substituted performance:
>
> > (1) delay in delivery or non-delivery in whole or in part by a seller . . . is not a breach of his duty under a contract for sale if performance as agreed has been made impracticable by the occurrence of a contingency the nonoccurrence of which was a basic assumption on which the contract was made.

Common law impossibility, formerly a very harsh doctrine which purported to require a showing of objective or scientific impossibility, has been moderated by case law to the point where it is equivalent to impracticability under the Code. The Restatement of Contracts, § 454, defines impossibility as "not only strict impossibility, but impracticability because of extreme and unreasonable difficulty, expense, injury or loss involved." Common law impossibility is frequently discussed under an "implied condition" analysis:

> [W]here parties enter into a contract on the assumption that some particular thing essential to its performance will continue to exist and be available for the purpose and neither agrees to be responsible for its continued existence and availability, the contract must be regarded as subject to an implied condition that, if before the time for

> performance and without the default of either party the particular thing ceases to exist or be available for the purpose, the contract shall be dissolved and the parties excused from performing it.

Texas Co. v. *Hogarth Shipping Co.*, 256 U.S. 619, 629 (1921).

In the Court's view, Westinghouse's claim of commercial impracticability raises four issues: (1) Was performance as agreed rendered impracticable? (2) Did the claimed impracticability arise from an unforeseen contingency? (3) Was the nonoccurrence of the contingency a basic assumption on which the contract was made? (4) Did the parties, explicitly or implicitly, allocate the risk that the contingency would occur?

There is nothing magical about these four questions: they are not, strictly speaking, elements of proof, or hurdles which Westinghouse must cross if it is to be excused for nonperformance. They merely provide, for purposes of the instant case, a useful method for structuring the inquiry.

It is further to be noted that the issues as framed are interrelated: the "answer" to each depends in part on the "answers" to the other three. For example, as stated by Judge Skelly Wright in *Transatlantic Financing Corp.* v. *United States*, 363 F.2d 312, 319 (D.C. Cir. 1966), "a willingness [on the part of the promisor] to assume abnormal risks . . . should legitimately cause us to judge the impracticability of performance . . . in stricter terms than we would were the contingency unforeseen." The interrelated nature of the issues involved might best be illustrated by comparing a fact pattern held to excuse nonperformance with one where the claim of impracticability proved unsuccessful.

Two very similar cases excusing nonperformance are *Kansas City* v. *Kansas City*, 393 F. Supp. 1 (W.D. Mo. 1975) and *Vernon* v. *Los Angeles*, 45 Cal.2d 710, 290 P.2d 841 (1955). In each, one city agreed to receive and dispose of sewage for another city. Supervening events occurred—in *Vernon*, an abatement injunction, and in *Kansas City*, the passage of federal water pollution laws—which prevented the promisors from continuing to dispose of the untreated sewage, and which

required them to build treatment plants at enormous expense. The contingency was held, in both cases, to have been unforeseen and unforeseeable; the means of performance required as a result of the contingency were entirely different from the means of performance agreed to; the risk of the contingency, being unforeseen, could obviously not be viewed as bargained for or as implicitly allocated to the promisor; finally, the expense of performance had been vastly increased. In light of these factors, the courts had no difficulty in finding the promisor cities' duty discharged.

By contrast, in *United States* v. *Wegematic*, 360 F.2d 674 (2d Cir. 1966) performance was held not to be excused. Defendant, a newcomer to the computer field, contracted to provide the federal government with a computer system. In soliciting bids for the project, the government stressed the importance of timely delivery. Defendant, which had described the offered system as "truly revolutionary", encountered severe engineering difficulties with its new technology, resulting in considerable delay and additional expense. In light of the fact that the promisor entered the contract knowing that the technology it intended to use was uncertain and that difficulties and added expense might occur, Judge Friendly, speaking for the Court, held that the risk of such difficulties was implicitly allocated to the computer company.

Thus, it is apparent that the four issues heretofore posited are interrelated; for purposes of analysis, however, the Court deems it helpful to address them individually.

1. Was performance as agreed rendered impracticable?

Westinghouse contends that the reversal of the government's policy concerning reprocessing, and specifically the 1977 presidential order banning commercial reprocessing, has had the practical effect of rendering performance as contemplated impracticable. At the time the contract was executed, Westinghouse expected to recoup between 16 and 19 million dollars from the spent fuel. Now, however, the fuel is virtually valueless. Thus, Westinghouse's basic contention is that the

government's actions have made commercial reprocessing unavailable, which in turn has massively increased the costs of removal of the spent fuel from Florida's plants.

In so arguing, Westinghouse relies in part on the sewage disposal cases discussed *supra*. There, as here, it is contended, a supervening governmental action rendered performance much more expensive than was contemplated at the time of execution.

The Court finds that the facts simply do not support the conclusion that Westinghouse's performance has been rendered impracticable. The short, albeit incomplete answer to Westinghouse's contentions is the plain language of the contract. The contract in unequivocal language requires Westinghouse to remove the spent fuel. It does not by any stretch of construction *require* Westinghouse to reprocess. The bargained for performance was removal; reprocessing was merely an option given to Westinghouse.

While the short answer is admittedly incomplete, it is far from meaningless, as may be seen from cases in which the issue was the nature of the performance claimed to be impracticable. In *Northern Corp.* v. *Chugach Electric Association*, 518 P.2d 76 (Alaska), *vacated on other grounds*, 523 P.2d 1243 (1974), *and later appealed*, 562 P.2d 1053 (1977), defendant agreed to build a dam for plaintiff. The contract specifically required defendant to transport rock for the project by hauling it across a frozen lake. When defendant attempted to do so, the ice proved too thin to support the rock and the hauling equipment. The court rejected plaintiff's contention that performance by alternate, more expensive means remained practicable. The fact that the means of performance was not only contemplated by the parties, but was, unlike the instant case, specifically provided for in the contract, relieved defendant from any obligation to perform by alternate means.

In two very similar cases, *Transatlantic Financing Corp.* v. *U.S.* 363 F.2d 312 (D.C. Cir. 1966) and *American Trading & Production Co.* v. *Shell International Marine, Ltd.*, 453 F.2d 939 (2d Cir. 1972), shipowners sought compensation for additional expenses incurred as a result of the fact that the Suez

Canal was closed after they had begun their voyages. To reach their destinations the ships had to sail around the Cape of Good Hope, a much longer voyage than through the Suez. The shipowners claimed that the contemplated means of performance, *i.e.*, passage through Suez, had been rendered impracticable. The courts rejected the shipowners' arguments: the fact that both parties to each of the contracts contemplated the Suez route "is not at all equivalent to an agreement that it be the exclusive method of performance". *American Trading*, 453 F.2d at 941. Because the promises to transport cargo from one point to another were unqualified, the shippers were not relieved of the obligation to perform by alternate means when the contemplated means became impracticable.

Thus, where the contract, explicitly or implicitly, provides for an exclusive means of performance, the impracticability of the specified means may release the promisor from his duty. Where, on the other hand, the promised performance is set forth in unqualified language, as was Westinghouse's promise to remove the spent fuel, the promisor may be required to perform by alternate means when the contemplated means become impracticable.

There can be no doubt that both Westinghouse and Florida contemplated that the spent fuel would be reprocessed. But there is no indication in the contract itself or in the history of its negotiation to indicate that reprocessing was viewed as the exclusive means of performance. Indeed, reprocessing was not in actuality the contemplated "means" of performance at all; it was the contemplated disposition of the spent fuel *after* performance. The means of performance, of removal, were left unspecified. Further, as will be hereinafter discussed, the evidence indicates that the unqualified nature of the promise was a consciously bargained for term of the contract. Florida, in its negotiator's words, sought "a suit of clothes", without regard to the process necessary to achieve this.

Even if reprocessing could reasonably be viewed as an exclusive means of performance, or as an integral part of the exclusive means of performance, there is the additional ques-

tion of whether the increased expense claimed by Westinghouse is sufficient to rise to the level of impracticability.

Promisors seeking to establish impracticability by reason of increased expense have not generally found a sympathetic ear in court. *See Maple Farms, Inc.* v. *City School District*, 76 Misc.2d 1080, 352 N.Y.S. 2d 784 (Sup. Ct. 1974); *Gulf Oil Corp.* v. *FPC*, 563 F.2d 588 (3rd Cir. 1977), *cert. denied*, 434 U.S. 1062 (1978); *United States* v. *Wegematic*, 360 F.2d 674 (2d Cir. 1966). Comment 4 to the Florida U.C.C. section on impracticability provides that increased cost alone may constitute impracticability where the increase is due to an "unforeseen contingency which alters the essential nature of the performance". Generally, however, "the fact that performance has become economically burdensome or unattractive is not sufficient for performance to be excused. . . . We will not allow a party to a contract to escape a bad bargain merely because it is burdensome". *Neal-Cooper Grain Co.* v. *Texas Gulf Sulpher Co.*, 508 F.2d 283, 293-294 (7th Cir. 1974). The strictness of this rule is based on a number of considerations: the fact, for example, that the very purpose of a fixed price agreement is to place the risk of increased costs on the promisor (and the risk of decreased costs on the promisee). Further, enforcing the bargain struck encourages parties to attempt to foresee cost variations, and to structure their agreements accordingly.

Without doubt, the sum which Westinghouse is precluded from recouping as a result of the unavailability of reprocessing is substantial. But impracticability by reason of additional expense is not to be determined by reference to the loss, or failure to profit, from one particular contract term in isolation. Rather, it is to be judged from the perspective of the entire undertaking. *Eastern Air Lines* v. *Gulf Oil Corp.*, 415 F. Supp. 429 (S.D. Fla. 1975); *United States* v. *Wegematic*, 360 F.2d 674 (2d Cir. 1966). There has been no showing that Westinghouse lost money on the entire "package deal" of plant and fuel contracts for Florida. Further, Westinghouse sought benefits beyond whatever profits it may have anticipated from the contracts: it clearly hoped that the Turkey Point plants would

demonstrate the benefits of nuclear power, and would promote its own position in the industry.

Admittedly, the additional cost of removal itself might be sufficient to constitute impracticability in another context. As will be discussed *infra*, however, the Court believes that to the extent that Westinghouse was aware of the uncertainties of reprocessing, it assumed the risk that reprocessing would prove to be more expensive than anticipated, or not available at any price.

2. Did the claimed impracticability arise from an unforeseen contingency?

The success of a commercial impracticability defense often turns on whether the promisor foresaw, or should have foreseen, the contingency claimed to have made performance impracticable. Where the promisor had no reason to anticipate a supervening event which radically increases the difficulty of performance, or which renders performance impossible, it is manifestly unfair to hold him to the agreement. For instance, a seller of produce may be relieved because of a total crop failure. *Mitchell Canneries, Inc.* v. *United States*, 77 F. Supp. 498 (Ct. Cl. 1948). Conversely, where the contingency may reasonably be said to have been foreseeable, courts have generally taken the view that the promisor should not be released from his obligation. This rule is based on the notion that where the parties can reasonably anticipate events that may affect performance, the prudent course is to provide for such eventualities in their contract.

Because the future is by definition unknowable, a rule holding the obligor to performance only where he foresees, but fails to guard against, the *precise* event that renders performance more difficult, would be meaningless. As may be seen from the following cases, it may be enough that he is (or should be) aware of a certain trend, or that a given state of affairs is in flux, or that an assumption is more than usually uncertain.

In *Eastern Air Lines* v. *Gulf Oil Corp.*, *supra*, the parties entered a requirements contract for jet fuel. They attempted to guard against price fluctuations through an escalator clause, which tied the price paid by Eastern for jet fuel to published prices of a certain type of domestic oil. In the year following the execution of the contract, the price of foreign oil rose substantially as a result of OPEC actions, including the 1973 embargo. In response, the United States government sought to control oil prices by implementing a "two tier" pricing system. The indicator oil chosen by the parties was in the lower tier, and its price rose far less rapidly than did Gulf's oil costs.

The court held that Gulf's performance had not been rendered commercially impracticable. While Gulf could not reasonably have anticipated the embargo, the precise effect that OPEC's actions would have on worldwide oil prices, or the advent of the two tier pricing system. it was aware of the volatility of affairs in the Middle East, of the constantly changing government price regulations, and of the general upward trend in oil prices. As one witness in that case stated, "the handwriting was on the wall". Therefore, even though the indicator chosen did not accomplish its intended purpose, in that it proved to be a very poor measure of Gulf's costs, the contract was enforced.

The analogies to the instant case are manifest. It is a fact that government policy favored reprocessing at the time the contract was negotiated; it is also a fact that, just as Gulf could not anticipate the two tier pricing system, Westinghouse could not have anticipated in 1966 that eleven years later President Carter would ban commercial processing. But while Westinghouse could not have foreseen the precise eventuality claimed to excuse performance, its officers certainly knew that commercial reprocessing was, at best, a highly uncertain proposition. In fact, as a practical matter, there was no such thing as commercial reprocessing in 1966. Westinghouse's claim that the unavailability of reprocessing was an unforeseen contingency is belied by the fact that, even at the time the contract was executed, reprocessing for Florida's anticipated spent fuel was, for all practical purposes, unavailable.

Further, Westinghouse cannot, in the Court's view, rely on the 1977 presidential order banning commercial reprocessing as an excuse for its consistent refusal to perform beginning two years earlier. The unavailability of reprocessing or storage for Florida's spent fuel prior to 1977 is clearly attributable, at least in part, to Westinghouse's own less than zealous attempts to obtain a facility. Apart from the drawn out, ultimately unsuccessful negotiations with AGNS, Westinghouse made no significant attempts to secure storage or reprocessing facilities, and gave little, if any, serious consideration to building its own facility, in spite of its knowledge that failure to remove the spent fuel could ultimately result in a shut-down of the plants.

3. Was the nonoccurrence of the contingency a basic assumption of the contract?

Westinghouse, pointing to the abundant evidence that both parties contemplated reprocessing, and to the fact that the price per kilowatt hour was calculated on the assumption that Westinghouse would obtain considerable value from the spent fuel, argues that the availability of reprocessing was a fundamental assumption of the contract, and therefore a condition of performance.

The Court finds, however, that notwithstanding the parties' expectation that reprocessing would occur, there is nothing in the evidence to evince any intention that Westinghouse was to be absolved from its responsibility to remove the spent fuel in the event that reprocessing would not be available. Indeed, it is difficult to discern how the availability of reprocessing could have been a basic assumption of the parties, given the fact that commercial reprocessing did not exist at the time the contract was executed, as well as the fact that the contract specifically calls for Westinghouse to do with the spent fuel as "it sees fit".

If there was a basic and mutual assumption in this regard, it was that Florida would have no involvement whatever with reprocessing, or with whatever alternate disposition Westinghouse might make of the spent fuel. Florida deemed reprocessing too speculative to undertake it. In light of Florida's rejection of formulas which tied its costs to reprocessing, it is

inconceivable that Florida would have agreed to a term conditioning Westinghouse's performance on the availability of reprocessing.

Certainly, as the Court has found, the bargained for price per kilowatt hour reflected the parties' anticipation that the fuel would be reprocessed. This, however, is not sufficient to transform an expectation into a basic assumption or a condition of performance. Arguments akin to that urged by Westinghouse in this regard were rejected in the Suez closing cases. In *American Trading and Pro. Co., supra*, the shipowner contended that because the shipping rate was based on a Suez passage, the availability of that route was a basic assumption of the contract. The court responded that "all that the . . . rate establishes is that the parties obviously expected a Suez passage but there is no indication at all in the instrument or *dehors* that it was a condition of performance". 453 F.2d at 942. Here, not only is there an absence of evidence that reprocessing was a condition of performance, there are positive indications that the unqualified promise to remove the spent fuel was bargained for, and that reprocessing was a subject left entirely to Westinghouse. These facts are radically inconsistent with the contentions made by Westinghouse.

4. Did the parties, explicitly or implicitly, allocate the risk that the contingency would occur?

Generally, the risk of a contingency affecting performance is placed on the promisor: "he is presumed, in the absence of evidence to the contrary, to have agreed to bear any loss occasioned by an event which was unforeseeable at the time of contracting". *Eastern Air Lines* v. *McDonnell Douglas Corp.*, 532 F.2d 957 (5th Cir. 1976). Comment 8 to Section 2-615 of the U.C.C. explains that the defense of commercial impracticability is not available where the risk may be deemed to have been allocated to the promisor:

> The provisions of this section are made subject to assumption of greater liability by agreement and such agreement is to be found not only in the expressed terms of the

> contract but in the circumstances surrounding the contracting, in trade usage, and the like. Thus the exemptions of this section do not apply when the contingency in question is sufficiently foreshadowed at the time of contracting to be included among the business risks which are fairly to be regarded as part of the dickered terms, either consciously or as a matter of reasonable, commercial interpretation from the circumstances.

The types of factors relevant to a determination as to whether a given risk has been allocated to a party are well set forth in *Maple Farms, Inc.* v. *City School District*, 76 Misc.2d 1080, 352 N.Y.S. 2d 784 (Sup. Ct. 1974). There, as a result of a substantial increase in the price of milk, a dairy sought to be relieved of a contract to sell milk to a school district at a fixed price. The court stated that even if it were to view the specific circumstances (sale of wheat to Russia, poor crops, market conditions) urged by the dairy as "unforeseen contingencies", the dairy would nonetheless be bound because of the many indications that it had implicitly assumed the risk of a price rise:

> Here the very purpose of the contract was to guard against fluctuations of price of half pints of milk as a basis for the school budget. Surely had the price of raw milk fallen substantially the [school district] could not be excused from performance. We can reasonably assume that [the dairy] had to be aware of escalating inflation, it is chargeable with knowledge of the substantial increase of the price of raw milk from the previous year's low. It had knowledge of the fact that for many years the Department of Agriculture had established the price of raw milk and that that price varied. It nevertheless entered into the agreement with that knowledge. It did not provide in the contract any exculpatory clause to excuse it from performance in the event of a substantial rise in the price of raw milk. On these facts the risk of a substantial

> or abnormal increase in the price of raw milk can be allocated to the [dairy].

352 N.Y.S.2d 784, 790. Thus, risk allocation is determined by the totality of the circumstances, including the comparative abilities of the parties to make informed judgments as to the extent of the risk; each party's interest in avoiding the risk; and the extent to which that interest was a factor in the negotiation of the contract. As indicated by the Comment, the foreseeability of the risk alone may well be sufficient for it to be regarded as implicitly assumed by the promisor.

Here, the record is replete with indications that Westinghouse, and not Florida, assumed the risk of any difficulties that might arise concerning reprocessing. As it made abundantly clear to Westinghouse throughout the negotiations, Florida, a public utility, had a strong interest in a low-risk, fixed price contract. Indeed, "strong interest" is too mild an expression: Florida's position throughout was that it would not agree to anything other than its finished "suit of clothes". Florida required, and Westinghouse agreed, that the means by which the "suit of clothes" would be made was to be left entirely to Westinghouse. As noted earlier, Florida's rejection of options under which the price of the fuel would depend on reprocessing renders it inconceivable that it would have accepted a contract term under which Westinghouse's performance was contingent upon the availability of reprocessing.

Westinghouse, by contrast, was in an entirely different situation as it met Florida across the bargaining table. As a giant in the then-nascent nuclear industry, it had a powerful interest in promoting both the viability of nuclear power, and its own position in the industry. In light of Florida's requirements, and of Westinghouse's knowledge that General Electric was actively seeking the contract, Westinghouse's goals, as it perceived them then, could not be achieved without taking substantial risks—the availability and cost of reprocessing being just one of many. Westinghouse was certainly in a position to know of the uncertainties, both technological and commercial, of reprocessing. Indeed, at the time it entered the

contract, Westinghouse had not yet conducted a detailed study of the fuel cycle.

Knowing full well Florida's requirements, and knowing that reprocessing, not being available even then as a practical matter, was highly uncertain, Westinghouse agreed to a contract term which in plain, unequivocal, unqualified language, required it to remove the spent fuel from Florida's plants. If this is not assumption of risk, the Court confesses itself unable to discern what would be. Whatever opinion one might hold as to Westinghouse's wisdom in agreeing to such a term, it did agree to it. There is nothing to indicate that the language of the term did not reflect the parties' intentions. On the contrary, all of the evidence, including the history of the negotiations and the parties' interests and goals in entering into the contract, indicate that the unqualified promise made by Westinghouse to remove the spent fuel was precisely the bargained for performance.

II. *Mutual Mistake*

Westinghouse contends that the parties made two related assumptions: that reprocessing would be available, and that the spent fuel had value. These assumptions having proven to be erroneous, Westinghouse argues that its performance is excused under the doctrine of mutual mistake.

Section 294 of the Restatement of Contracts 2d provides as follows:

> (1) Where a mistake of both parties at the time the contract was made as to a basic assumption on which the contract was made has a material effect on the agreed exchange of performances, the contract is voidable by the adversely affected party unless he bears the risk of the mistake. . . .

Section 293 defines "mistake" as a "belief not in accord with existing facts".

It is immediately apparent that the defense of mutual mistake includes two of the same elements as the doctrine of commercial impracticability: it requires the mistaken fact be as to a basic assumption, and it is qualified by the notion of risk allocation. The Court has already made findings as to these issues adverse to Westinghouse. However, in light of the magnitude of this dispute, the Court deems it appropriate to more fully address the issues as they arise under this defense.

The Court finds that the parties' anticipation that reprocessing of the spent fuel would occur was not a mutual mistake of fact, but rather an erroneous prediction. Indeed, Florida proved not to have been mistaken at all; it viewed reprocessing as too speculative a proposition to agree to any involvement in it, or to a contract under which either the price it would pay or Westinghouse's performance was in any way dependent upon it.

One recent case (decided after the parties' last briefing in this matter), *Aluminum Co. of America* v. *Essex Group*, (*Alcoa*) 499 F. Supp. 53 (W.D. Penn. 1980), creates considerable tension in the distinction between a mistake as to a fact existing at the time the contract was executed, and an erroneous prediction of a future event. The Court addresses *Alcoa* not because it must distinguish it, but rather because its distinctions from the instant case are particularly enlightening.

In *Alcoa*, the parties entered a long term contract in which Alcoa agreed to process alumina for Essex. After a careful study, the parties developed a complex pricing formula. One component of the formula was designed to reflect Alcoa's labor costs; another component, intended to reflect Alcoa's non-labor costs, was tied to the Wholesale Price Index (WPI). The non-labor component was arrived at on the basis of a study showing that for many years, there had been a close correlation between the WPI and Alcoa's non-labor costs. However, after the contract was executed, the price of electricity, a major component of Alcoa's non-labor costs, rose enormously, far outpacing the rise in the WPI; as a result, Alcoa suffered substantial losses. Essex, on the other hand, obtained considerable windfall benefits by selling the alumi-

num it manufactured from alumina processed by Alcoa, because the rise in the market price of aluminum also far outstripped the WPI.

The court held that the parties' belief, at the time the contract was executed, that the WPI would reflect Alcoa's non-labor costs was a mutual mistake of fact rather than an erroneous prediction of future events, and that therefore Alcoa was entitled to relief under the doctrine of mutual mistake.

While the Court has, most respectfully, some difficulty with the holding in *Alcoa*, it has no difficulty in finding that, even under that court's expansive reading of mutual mistake, Westinghouse's reliance on that defense is misplaced. As the *Alcoa* court noted, there is an important difference between conscious and unconscious ignorance of a material fact: "where parties enter a contract in a state of conscious ignorance of the facts, they are deemed to risk the burden of having the facts turn out to be adverse, within very broad limits". 499 F. Supp. 53, 68. In the instant case, there can be no doubt that the parties entered the contract in a state of "conscious ignorance" as to the technology, costs, and even the availability of reprocessing for Florida's spent fuel, as indicated by the fact that commercial reprocessing was not then readily available, and by Westinghouse's candid admission that its price calculations were based on "very little knowledge".

A passage from *Alcoa* is particularly instructive as to the distinction between conscious and unconscious ignorance:

> [I]f parties agree to sell and purchase a stone which both know may be glass or diamond at a price which in some way reflects their uncertainty, the contract is enforceable whether the stone is in fact glass or diamond. If, by contrast, the parties both mistakenly believe it to be glass, the case is said not to be one of conscious ignorance but one of mutual mistake.

499 F. Supp. at 68. The instant case falls in the first category; Judge Teitelbaum held that *Alcoa* fell in the second. While the Court is convinced that the price per kilowatt hour charged to Florida was lower than it would have been if Westinghouse had

known that it would not be able to reprocess, the Court is equally certain that the price was higher than it would have been had there been no uncertainty about reprocessing. Expressed another way, Westinghouse was wagering that the stone would turn out to be a diamond. That it misjudged the odds does not release it from its bargain.

A related distinction is the manner in which the mistake, or the erroneous prediction, affects the contemplated performances or the equivalence of value. To the extent that *Alcoa* was disadvantaged by the mistake, Essex was enriched. Here, by contrast, while the unavailability of reprocessing has the effect of making performance by Westinghouse more expensive, it in no way enriches Florida, or gives Florida any benefit it did not bargain for.

Westinghouse's own poor judgment and mistakes cannot alone excuse its performance.

III. *Force Majeure*

Westinghouse claims that its nonperformance is excused by the terms of the contract's force majeure clause, which reads as follows:

> Section 9. Force Majeure
>
> Except as otherwise specifically provided in this contract, neither Westinghouse nor Florida shall be liable for loss, damage, detention, or delay resulting from causes beyond its reasonable control, including but not limited to, fire, work stoppage, civil or military authority, restrictions of the United States Government, or any department, branch or representative thereof, insurrection, or riot, embargoes, car shortages, wrecks or delays in transportation, or inability to obtain necessary labor or manufacturing facilities due to such causes.

Westinghouse points to other contract provisions, which give Florida responsibility for the fuel from the time that it is delivered until Westinghouse removes it. Read together, it is contended, these provisions indicate that Florida assumed the

risk of having to store the spent fuel in the event that Westinghouse was unable to remove it as a result of one of the contingencies listed in the force majeure clause, and that therefore Westinghouse's performance is excused.

As noted earlier, the risk of a contingency that affects performance is presumed to rest on the promisor. However, the parties may agree to shift a particular risk to the promisee, or to allocate the various risks between them as they see fit.

For instance, in *Eastern Air Lines* v. *McDonnell Douglas*, 532 F.2d 957 (5th Cir. 1976), McDonnell Douglas urged both commercial impracticability and an "excusable delay" clause, exempting McDonnell Douglas from liability for delays beyond its control, in defense of Eastern's action for damages caused by late delivery. The late delivery was attributable to informal demands by the government that McDonnell Douglas accord priority to military aircraft for the Vietnam war. The court held that the excusable delay clause had the effect of broadening the protection afforded McDonnell Douglas under the U.C.C., and that the government's demands came within the terms of that clause.

Because of the same factors which compelled the Court to reject Westinghouse's defense of commercial impracticability, it is unable to view Westinghouse's obligation as discharged under the force majeure clause. To begin, Westinghouse's argument ignores the important fact that unlike the clause in *McDonnell Douglas*, which exempted only the seller, the force majeure clause at issue here *protects both Westinghouse and Florida*. To construe the clause as Westinghouse contends would, in effect, place the entire loss on Florida—a result not consonant with the clause itself, or with the parties' intentions concerning allocation of risk.

Further, the language of the clause is such that it is simply not applicable to the facts. The term reads "except as otherwise provided in the contract". Section 27 of the contract unequivocally places responsibility for removal of the spent fuel on Westinghouse. Westinghouse's contention that other contract terms place responsibility for the fuel on Florida until it is removed is not only misguided—it is cynical, in light of the

fact that the fuel remains with Florida only because of Westinghouse's refusal to remove it. To adopt Westinghouse's construction of the phrase "until it is removed" as a valid defense to its failure to perform, in the context of the whole contract, would, in the Court's opinion, denude the law of reason.

Finally, the force majeure clause applies only to losses resulting from causes beyond the parties' reasonable control, including actions of the government. As noted in the discussion of commercial impracticability, the Court is unable to conclude that Westinghouse's failure to perform was in any meaningful way caused by the government's actions. Reprocessing, not removal from Florida's site, was rendered illegal by presidential order. No representative of the government has ever forbidden Westinghouse to transport spent nuclear fuel from Florida's spent fuel storage site to some other site; nor has any government stricture prevented Westinghouse from accepting responsibility for the spent fuel from Florida, as required by the contract. Further, the presidential order was not issued until two years after Westinghouse's initial refusal to remove the first spent fuel. Finally, in light of the fact that Westinghouse's attempts to obtain reprocessing facilities prior to the presidential order were less than aggressive at best, it has not been shown that Westinghouse's failure to obtain reprocessing during that period, much less its failure to remove the spent fuel, resulted from causes beyond its reasonable control.

IV. *Frustration of Purpose*

Westinghouse contends that, insofar as its purpose in promising to remove the spent fuel was to obtain value from it through reprocessing, that purpose has been completely frustrated by supervening events.

The defense of frustration of purpose, like commercial impracticability and mistake of fact, is limited by the parties' allocation of the risk that the supervening event will occur. *See* Corbin, *Contracts*, § 1354 (1964). Having found overwhelming evidence that Westinghouse assumed the risk of the uncertain-

ties of reprocessing, the Court cannot find that frustration of purpose excuses its nonperformance.

Additionally, it is to be noted that while in the narrow sense, Westinghouse's purpose in agreeing to remove the spent fuel was to reprocess it, Westinghouse's broader purpose was to secure the Florida contract. The Court has found that Florida would not have agreed to a contract which required it to reprocess the fuel, or which gave it responsibility for the spent fuel after the "cooling off" period. Knowing this, Westinghouse agreed to remove the fuel; and by so doing, it did indeed achieve its larger purpose of obtaining the Florida contracts for the construction of two nuclear steam supply systems. That its accomplishment in this regard may now be viewed by it as a commercial tragedy is unfortunate, yet one cannot but conclude that Westinghouse is to a great extent the architect of its own misfortune.

V. *Relief*

As the Court has previously noted, Florida has already been financially damaged in an amount in excess of nine million dollars, and any relief must, of course, call for reimbursement, at least to that extent. There has been some evidence to the effect that other utilities have been considering the construction of interim spent fuel storage facilities. The estimates of the cost of such facilities, depending on the site and capacity, range from 20 million dollars to 44 million dollars. Estimates of the cost to construct a storage facility, if one can be constructed, at the Turkey Point site, are in excess of 33 million dollars, with a further annual cost of approximately one million dollars.

In addition to monetary damages for expenses incurred thus far in storing the spent fuel, Florida seeks an order requiring Westinghouse to specifically perform its promise to remove the spent fuel. Westinghouse contends that Florida is not entitled to a decree of specific performance under Florida law on the following grounds: (1) that Florida has not shown that monetary damages would be an inadequate remedy; (2) that Westinghouse cannot be ordered to remove the spent fuel because

its performance necessarily depends on the cooperation and assent of third parties (specifically, government agencies which regulate the nuclear industry), and (3) specific performance is inappropriate in light of the difficulty of fashioning a specific and workable decree, and of monitoring the parties' compliance therewith over the long term.

Under Florida law, specific performance is often said to lie within the "sound discretion" of the Court. *Buck* v. *McNab*, 139 So. 2d 734 (Fla. Ct. App. 1962). It is discretionary in the sense that the Court may,—indeed, in many cases, must—make judgments based on equitable considerations. However, it is not "discretionary" in the sense that the Court's power is relatively unlimited:

> By saying that the exercise of discretion must be 'sound' and 'judicial', the courts should be understood as meaning that there are reasonably well established working rules and standards by which they are governed in granting and refusing the remedy.

Corbin, *Contracts*, § 1136. Because the Court does not possess current information as to a number of crucial factors bearing on the appropriateness of a decree of specific performance, and, more importantly, because it wishes to provide the parties an opportunity to reach agreement as to how Westinghouse's duty may best be discharged, it does not now decide which of the remedies available to it should be applied here. The Court deems it appropriate, however, to discuss briefly the factors relevant to the selection of a remedy in the hope that the Court may assist the parties in reaching agreement, or, if such should prove necessary, that the parties may better assist the Court by providing evidence bearing on the matter as expeditiously as possible.

Specific performance may be warranted where the plaintiff cannot be adequately compensated by an award of damages. *City Stores Co.* v. *Ammerman*, 266 F.Supp. 766 (D.D.C. 1967). Here, there is considerable uncertainty as to Florida's future damages. Its estimate as to the expense it will have to incur should it be forced to shut down its plant in 1985 is just

that—an estimate. Given the volatility of the price of all forms of energy, its actual expenses may vary considerably from this projection. Florida will, if the spent fuel is not removed, doubtlessly suffer very large future damages as a result of Westinghouse's breach. While this uncertainty would not be sufficient to defeat a damages claim, *Twyman* v. *Roell*, 166 So. 215 (Fla. 1936) the uncertainty of the estimate is to be noted as one factor tending to militate in favor of specific performance. A further uncertainty arises from the probable difficulty of Florida obtaining from another party performance substantially similar to that promised by Westinghouse. The Court does not have information concerning the current availability of storage faciltiies or the present government regulations and policies concerning transportation of spent fuel. At trial, there was evidence that it would be extremely difficult, if not impossible, for Florida to obtain a contract for removal by another party. To the extent that this remains true, it may be viewed as another factor favoring specific performance.

By the same token, however, the very factors which might render it difficult for Florida to contract for removal with a third party would, obviously, make performance by Westinghouse difficult. While the Court has concluded that Westinghouse's nonperformance is not excused by commercial impracticability, this is not to be construed as precluding the Court from giving consideration to the hardship of performance in deciding the question of remedy. There are "[f]acts that are not sufficient to invalidate a contract and that may nevertheless be sufficient to induce the refusal of a decree for specific enforcement". Corbin, *Contracts*, § 1162.

Finally, while the Court is fully cognizant of the difficulty of fashioning a sufficiently specific decree should the parties be unable to reach agreement, and should the Court conclude that specific enforcement is appropriate considering the various other factors, the Court believes that, with the assistance of the parties, a workable and appropriate decree would be achieved.

The Court, however, fervently hopes that it will not be called upon to draft a decree, not because it would be difficult, but rather because the Court is convinced that the parties them-

selves are in a far better position to find an equitable solution. The future of nuclear energy is a political question upon which the Court expresses no view. Resolution of the issue may or may not assist the parties in reaching an agreement. Regardless, however, of the government's present or future policies and actions vis-a-vis nuclear power, it is clear that, under the law, Westinghouse is liable to Florida for its breach of contract. It must pay damages, or perform, or some combination thereof, whether by agreement of the parties or by order of the Court. The former is, in the Court's view, far preferable in light of the parties' greater ability to discern the best interests of both Florida's ratepayers and Westinghouse's shareholders, and their greater experience in solving complex practical problems.

The Court is not without some perspective as to the willingness and ability of the parties, with the assistance of the Court, to reach a fair agreement. Westinghouse has, in a series of cases which the multi-district panel transferred to this court along with the instant case, evidenced its good faith and willingness to work toward fair and equitable solutions of myriad complex problems. The agreements reached were, in the Court's view, beneficial to the parties and the public as well. Plaintiff, too, has shown its good faith as evidenced by the fair solution reached in another aspect of the instant case.

The solutions to which this Court makes reference were reached after all parties, through their respective counsel, fairly, fully and vigorously litigated the issue of liability. The Court is satisfied that no less a result may be attained here. In the event, however, that the Court's hope in this regard does not reach fruition, then the parties may present further evidence on the issue of specific performance, as well as evidence in reference to a fair monetary award. As mentioned *supra*, there is considerable uncertainty in the present record as to Florida's future damages. Further evidence will be necessary, to the end that Westinghouse pay no more, and Florida receive no less, than is fair.

Therefore, the parties will be granted ninety (90) days within which to attempt to reach agreement as to the form of the decree to be entered in this matter. Should they wish additional time, the Court may be willing to grant it, upon a showing that additional time would be productive.

In the interim, the Court will meet and confer with counsel, in an effort to assist them in reaching agreement, and for the purpose of more fully apprising the parties as to the further information which the Court deems necessary to draft an appropriate decree in the event that the parties fail to reach an agreement. At such a meeting the parties should be prepared to render assistance in the selection of an expert for the purpose of assisting the Court, should the Court conclude that such assistance is necessary, in ascertaining the various alternatives, if any, leading to the removal and storage of the spent fuel.

In view of the fact that the interests of both parties and the public would best be served by an expeditious and final resolution of this matter, both parties are urged to use the initial time period in an intensive attempt to reach agreement, rather than in preparing to further litigate the issue of remedy.

An appropriate order shall issue.

/s/ ROBERT R. MERHIGE, JR.
UNITED STATES DISTRICT JUDGE

Date: June 25, 1981

APPENDIX C

Opinion on Remedies of the United States District Court for the Eastern District of Virginia

IN THE UNITED STATES DISTRICT COURT

FOR THE EASTERN DISTRICT OF VIRGINIA

RICHMOND DIVISION

Civil Action No. 75-0677-R

FLORIDA POWER AND LIGHT COMPANY,

Plaintiff,

—v.—

WESTINGHOUSE ELECTRIC CORPORATION,

Defendant.

MEMORANDUM

This matter was tried to the Court. In an opinion issued June 25, 1981, the Court made extensive factual findings concluding that Westinghouse was liable for breaching its contract to remove and dispose of the spent fuel generated at Florida's Turkey Point nuclear reactors pursuant to a fuel contract that Westinghouse had entered into with Florida in 1966.

Florida, in its suit, was seeking an award of damages for the amount it had spent to the date of trial in accommodating the spent fuel accumulating at the reactor sites through a "re-racking" of its spent fuel storage pits at those sites, and in addition was seeking an order directing Westinghouse to specif-

ically perform its obligation to remove the fuel. The Court, after finding Westinghouse liable, determined that rather than attempt to order a specific remedy, it would give the parties a further opportunity to attempt to negotiate a solution to the question of how Westinghouse could best fulfill its obligation to remove the spent fuel. Short of that, the parties would be given an opportunity to provide the Court certain additional information on what the possibilities were for removing the fuel, so as to assist the Court in determining the appropriate remedy.

The parties made a good faith effort to negotiate the remedy but failed. In October, 1983, the parties returned for the purpose of supplying the Court with additional information to aid the Court's remedy determinations. Florida sought damages of roughly $87 million altogether, not including the value of certain work that Westinghouse had already agreed to do on the interim storage facilities at Turkey Point. In the meanwhile, Westinghouse had moved for a reconsideration of the Court's 1981 liability determination.

The Court issued a decision in January of 1984 that was intended to finally resolve all the then outstanding issues in this litigation. Florida has now moved for reconsideration of the 1984 decision on a number of grounds. One is designated as "unfair surprise."

The Court is satisfied that Florida has been well aware of the range of issues Westinghouse expected to be arguing in this remedy/reconsideration round and accordingly that this claim (which was not pressed at oral argument) is not well-taken.

Nevertheless, Florida has persuasively suggested that the Court's 1984 decision was, in at least some significant regards, inconsistent with its 1981 decision and that the inconsistencies arise from errors of law in the later decision. In the hopes of disposing of all outstanding issues, the Court has determined to grant Florida's motion to reconsider, to fully review the evidence introduced at the 1979 liability trial and at the 1983 remedy hearing, and upon conclusion thereof to make a final determination as to the appropriate remedy.

Factual Background

The Court's 1981 decision thoroughly set out the facts before the Court at that time. *See* 517 F. Supp. 440 (E.D. Va. 1981). At this point the Court need only address developments since the 1981 decision, and facts that Westinghouse has cited as supporting reconsideration of the findings in the 1981 decision.

A. Developments since 1979

At the time the parties originally came before the Court on this matter, two facts hovered over the Court and the litigants in such a way as to make the remedy determination both difficult and pressing. On the one hand, Florida represented to the Court—and the Court is satisfied that it was Florida's sincere belief—that if the spent fuel were not promptly removed from its reactor sites, the reactors would be forced to shut down, at a cost of a half-million dollars daily for substitute power. On the other hand, it appeared that there was not any means then available or likely to be available in the future whereby the spent fuel could be removed and disposed of.

These two facts had left the parties facing a dire future and the Court frustrated in its efforts to do complete justice. Fortunately the facts which were the basis for that set of circumstances are no longer accurate. First, further technological study has revealed that it is indeed possible to "re-rack" the Turkey Point spent fuel storage pits a second time, so as to provide sufficient on-site storage for all the spent fuel that the reactors will discharge over its useful life. This means that there is no chance that the reactors will be forced to shut down, and consequently no prospect that anyone will expend a half-million dollars daily on substitute power. Florida and Westinghouse have agreed that such a second re-racking at Turkey Point is in order, and Westinghouse has agreed to do the necessary work at no cost to Florida.

Second, the United States Government ("the Government") has finally taken what appear to be firm steps toward creating a permanent disposal site for nuclear spent fuel. The Nuclear Waste Policy Act of 1982 ("NWPA"), which became law in early 1983, provides for locating and constructing a government-owned, permanent, deep-burial repository for spent fuel. 42 U.S.C. § 10101 *et seq*. The Act sets out a specific timetable culminating in the opening of the site for receipt of spent fuel in 1998.

The Act provides for negotiation of fixed-price contracts to be entered into currently between "owners and generators" of spent fuel and the Department of Energy ("DoE"), pursuant to which DoE agrees to take title to the spent fuel in exchange for a negotiated fixed fee. 42 U.S.C. § 10222(9)(1). The significance of having DoE take title to the spent fuel is that the contracting party can thereby rid itself of any further financial responsibility in connection therewith, and particularly of risks associated with the operation of the government repository.

The NWPA required utilities using nuclear fuel to enter into such contracts with DoE promptly as a condition to having their licenses renewed, which Florida has accordingly done. Florida actually executed at least two such contracts, one for the ten years' worth of spent fuel that is the subject of this dispute and one for the spent fuel that Florida's reactors will generate during their 20 years' worth of useful life remaining after the end of the Westinghouse fuel contract. The DoE's disposal fee for the disputed spent fuel was fixed at roughly $70 million. The NWPA mandates that this fee be designed to cover a proportionate share of the costs of the permanent repository and no more, and no party has suggested that the $70 million is unduly high by that standard.

The NWPA abandons for the most part the federal government's earlier policy, announced in 1977, of seeking to construct government-owned away-from reactor ("AFR") storage facilities in which to keep spent fuel in the interim until the permanent repository becomes available. The NWPA instead encourages interim storage at the reactor sites, through the use of techniques such as re-racking, which Florida is employing at

Turkey Point. It provides for only a limited amount of government-owned AFR storage, for spent fuel from reactors at which further on-site storage is not feasible.

Westinghouse suggests that the NWPA also mandates that the costs of the permanent repository be passed on to nuclear electricity ratepayers. The Court, though once of a similar opinion, is not convinced. In fact, the legislative history indicates that the financing scheme of imposing a disposal fee on "owners and generators" of spent fuel was chosen over several other proposals, including one in which a "generation fee" would have been assessed directly to nuclear electricity ratepayers. See DX-SF-467,[1] *Congressional Budget Office Study on Financing Radioactive Waste Disposal*, September 1982.

Westinghouse is accurate in its contention that the legislation contemplates that the "generators and owners" of spent fuel would typically be utilities and that the utilities would be allowed to pass the expense on to their ratepayers. However, the statutory language was not intended to alter whatever responsibility a party such as Westinghouse might have to a utility and/or its ratepayers, as the following language from the Congressional debates on the bill show:

> MR. GORE: . . . I want to confirm that an understanding we had in the Committee on Energy and Commerce is shared generally by Congress as to the effect of this legislation on contractual commitments to dispose of spent nuclear fuel. Page 85 of that committee's report on H.R. 6598 states generally that *nothing in the bill . . . would relieve any other parties who may have contracted with such generators or owners to be responsible for some or all disposal costs, from any of their contractual obligations.*
>
> Is that correct?

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1 In the trials, defendants' exhibits were numbered "DX-SF-_____" and plaintiffs' exhibits were numbered "FPL-SF-_____." The "SF" stands for "spent fuel" and distinguishes these exhibits from the exhibits submitted in the uranium litigation with which this dispute was originally tried.

> MR. UDALL: . . . that is correct, as far as our committee is concerned.
>
> MR. OTTINGER: And it is correct as far as our committee is concerned.

Congressional Record Vol. 128 (1982), September 30, 1982, H8171 (emphasis added).

Another legal development, which the parties have not highlighted presumably because its practical significance is minimal despite its apparent moment, is that President Reagan in 1981 lifted the ban on commercial reprocessing that President Carter had imposed in 1977. As the Court's 1981 decision makes clear, Westinghouse had relied on President Carter's reprocessing ban as a major part of its commercial impracticability argument. The ban, however, turns out to have been merely one manifestation of intense political opposition to reprocessing on environmental and safety as well as national security grounds, and hence the opposition did not disappear when the ban did.

It would appear that the opposition is not so much to reprocessing, as such as to the plutonium produced in the process. Reprocessing would convert spent fuel into separate quantities of uranium, plutonium, and radioactive wastes. Proponents of nuclear technology hoped that the plutonium, as well as the recovered uranium, could profitably be recycled as new fuel for the same or other reactors.

Other vocal participants in debates on nuclear energy have contended that the presence of the plutonium is a cost rather than a benefit. They claim that plutonium, which is a highly volatile material, poses safety risks (e.g. of accidental leakage), as well as national security risks, that counsel against allowing it to become available in large quantities in private hands.

In light of this vocal opposition, even without a presidential ban, the licensing process for any new commercial reprocessing venture would be long and expensive at best. Additionally, new safety regulations would probably require technological safeguards and physical surveillance for the plutonium, and these additional costs could make commercial reprocessing exceed-

ingly expensive even if it could be licensed. Not surprisingly, in this light, none of the corporations that might have been expected to enter the business once the ban was lifted have expressed any interest in doing so, and experts in the field have predicted that, absent federal legislation to provide financial support and insurance against further fluctuations in government policy, no further business venture into commercial reprocessing is likely to take place.

B. The Experts' Reports

In response to the Court's inquiries on remedy options, both Westinghouse and Florida hired experts to explore what if anything could be done with the disputed spent fuel. The experts, quite appropriately, did not focus on what theoretically could have been done had proper steps been taken at some earlier time, nor did they concern themselves with how the cost of the possible solutions would be paid. Rather, they focused on the practical question of what options, if any, were available or could reasonably be made available at present.

Westinghouse submitted its experts' report as evidence at the remedy hearing. DX-SF-437. Florida did not do so, but the Court's understanding is that the experts on both teams were in agreement on the major points addressed in any event. The experts were in constant consultation with each other, and the Westinghouse report purports to summarize the Florida experts' conclusions as well as their own. The Court accepts their summaries thereof as accurate.

The experts' key conclusion is that there is currently nowhere to which the disputed spent fuel could lawfully be removed. The parties have now stipulated to this fact. The experts found that the most—indeed the only—currently feasible option for dealing with the spent fuel is to keep it at the Turkey Point reactor sites in re-racked storage pools until the permanent federal repository becomes available, at which time it will be delivered to that repository. The total cost of this solution will be almost $100 million. This sum consists of the $70 million disposal fee to DoE and roughly $13 million costs-

plus-interest for the first re-racking, both of which Florida seeks to have Westinghouse pay, and roughly $12 million in costs for the second re-racking that Westinghouse has agreed to perform.[2]

This conclusion alone resolves, in the negative, the question of whether the Court can or should order Westinghouse specifically to perform its promise to remove at the present time. However, some further explanation of the bases for this conclusion may aid the determination of what if any damages Westinghouse must pay Florida for the costs incurred and to be incurred for the interim storage at Turkey Point and for disposal in the permanent federal repository.

The experts' conclusion that the fuel could not lawfully be removed was not based on legal or technical difficulties with transporting the spent fuel away from the reactor sites. While local or state laws may make transporting spent fuel expensive and/or impossible in some locations, and environmental/safety considerations may counsel minimizing such transport, there is no general legal ban on physically removing the spent fuel, nor are there technical barriers to so doing. This is as true in 1984 as it was in 1979. The problem lies, instead, with finding a place that could lawfully take the spent fuel once removed. Here, too, there is no general legal ban against, or technical difficulty with, AFR storage sites. However, economic, licensing, and timing considerations effectively eliminate all options other than on-site storage at Turkey Point.

At the beginning of their study, the Florida and Westinghouse experts conferred with each other and divided the possible alternatives into four classes for purposes of investigation, as follows: (1) potential for use of existing off-site storage facilities; (2) potential for development of a new off-site (AFR) facility; (3) expansion of the capacity of Florida's existing on-site storage facilities (through re-racking, etc.); and (4) construction of a new on-site storage facility.

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2 *See* 517 F. Supp. 440 at 448 wherein the court found Florida had expended $9,473,242.04 in the first re-racking. *See also* p. 460 wherein the court held Florida was entitled to reimbursement of this expenditure.

In exploring existing off-site facilities, the experts searched domestic and foreign possibilities, and explored both government and private-owned sites. Their exploration of foreign possibilities included reprocessing facilities as well as storage. Their conclusion was that no off-site facilities are presently available to accept the Turkey Point spent fuel, nor will any become available before the date, sometime in the late 1980's, at which Florida's existing on-site storage facilities are predicted to be filled to their maximum capacity, absent the agreed upon second re-racking.

While the experts found one or more domestic storage facilities and at least one foreign commercial reprocessing facility that were available in the physical sense, all of these had their full capacity over the relevant period tied up on contractual obligations with other entities or were for other reasons unwilling to accept the Turkey Point spent fuel. One such facility worth noting is the GE facility at Morris, Illinois. This facility was originally licensed and constructed as a reprocessing plant, but when it became apparent in the early 1970's that it was not economically practical to operate the plant as such, GE converted it into a storage facility. GE has used the Morris facility since 1971 to store spent fuel only from customers with whom GE had prior reprocessing and fuel cycle service contracts. Because neither Westinghouse nor Florida had such a contract with GE, GE will not accept the Turkey Point spent fuel.

As to the existing foreign reprocessing facilities, the Westinghouse experts concluded that in addition to the fact that their full capacity is already committed for at least the next 13 to 15 years, exporting the spent fuel and transporting it such distances would entail prohibitive regulatory and political problems.

The experts' conclusion as to the potential for new off-site facilities was just as bleak. There are currently no plans for any such facilities, except the government's plans pursuant to the NWPA for a limited capacity site for utilities that cannot feasibly store their spent fuel on-site.

The experts also considered the feasibility of Westinghouse or Florida developing and constructing an AFR facility. They concluded that a new AFR would be very expensive, and that locating a site for it would be exceedingly difficult because of political opposition to such facilities. Additionally, the NWPA expresses a government policy of encouraging new on-site storage, rather than private AFR's. The government policy does not mean that an AFR would automatically be unlicensable, but in combination with the fact that re-racking could serve the same needs at lower cost and with less political controversy, it would make licensing most difficult. The experts also agreed that in any event a new AFR could not be licensed and built in time to receive fuel before Florida's existing storage facilities reached their full capacity in 1989.

The various on-site alternatives considered need not be described in detail. Briefly, in light of technical, economic and political considerations, the experts concluded that the best on-site solution was a re-racking of the existing storage pools at Turkey Point. Having concluded that it is so far superior on these grounds, all of which would play a part in licensing determinations, the experts further concluded that any on-site option other than re-racking would probably be unlicensable.

C. *Facts Urged in Support of Westinghouse's Reconsideration Arguments*

Westinghouse's proposed findings of fact submitted for the October 1983 remedy hearing include a number of factual propositions that would entail reconsideration or reinterpretation of findings made in the 1981 decision. This section addresses those propositions only insofar as the Court has deemed it necessary to give additional consideration to the issues they address.

(i) *Westinghouse urges the Court to find that it never was possible for Westinghouse to have removed any of the Turkey Point spent fuel, because at no point since the first batch of spent fuel was ready for removal in 1975 has there been any place to which the spent fuel could lawfully have been removed.*

Westinghouse has not proved this assertion to the Court's satisfaction, at least not without qualifications. Westinghouse takes an inappropriately static approach to these issues, by focusing on an overly narrow time period and by overlooking the extent to which its own activity or lack thereof helped shape the circumstances that unfolded. Westinghouse convincingly makes the case that by 1975 there was in fact no place available that could and would accept the Turkey Point spent fuel. This fact does not address in a meaningful manner the Court's 1981 finding that "the unavailability of reprocessing or storage for Florida's spent fuel prior to 1977 is clearly attributable, at least in part, to Westinghouse's own less than zealous attempts to obtain a facility." 517 F. Supp. at 455. Reprocessing and/or storage facilities cannot be expected to spring out of the ground at the moment they are first needed. Licenses must be obtained, buildings constructed, etc. Not surprisingly, commercial operators of such facilities may wish to book contracts with their potential customers several years in advance. Consequently, the relevant question is whether Westinghouse could have made a reprocessing or storage facility available in 1975 if it had taken the necessary steps in the years preceding.

Westinghouse's new evidence and arguments have not tilted the balance in Westinghouse's favor on this question. Nor do the experts' reports add anything to Westinghouse's arguments on this point. As discussed *supra*, their approach was appropriately forward-looking, and they do not tell us anything about what might have been available had various steps been taken at some earlier time. Additionally, Westinghouse has not challenged the Court's 1981 finding that Westinghouse failed to act

diligently in the early 1970's to secure a reprocessing and/or storage facility for the Turkey Point spent fuel.

The only suggestion has been that the results would have been the same even if Westinghouse had acted diligently. The AGNS facility would, so the argument goes, still have failed as a reprocessing plant, and its owners would still not have converted it to a storage facility for its former reprocessing customers.

Westinghouse has not satisfied the Court that this is completely so. The AGNS facility, as built for reprocessing, had existing storage capacity in 1975 which would have been more than enough for the spent fuel disputed here. Had Westinghouse pressed its contract negotiations with AGNS more aggressively, or had it sought to enforce what its witnesses claimed was a lawful contract whereby AGNS agreed to remove and reprocess the disputed spent fuel, at least some of this space could have been made available to Westinghouse. While other customers may have successfully insisted that the space be shared with them, it is reasonable to conclude that a portion of it would have been allocated to Westinghouse.

Indeed, the AGNS facility could conceivably have been expanded to serve as an AFR storage facility for a much larger quantity of spent fuel, making space available for all of Westinghouse's spent fuel as well as that of AGNS's other customers, as was done at GE's Morris, Illinois facility. With the exception of complications from local laws in some states regarding the transport of spent fuel, the GE facility is successfully operating as an AFR today, accepting spent fuel from the customers who had originally contracted with it for reprocessing.

Westinghouse argues that the AGNS facility could not have been made available as an AFR because it would have been unlicensable as such. This argument carries little weight with the Court. The Nuclear Regulatory Commission ("NRC") had licensing procedures pursuant to which the GE facility was licensed as a storage facility in the mid-1970's, 10 C.F.R. Part 72, and the NRC now has on its books procedures designed specifically for the licensing of such facilities. 10 C.F.R. Part

72. The explanation as to why this and other options would be unlicensable springs not from any firm legal obstacle, but from the proposition that the NRC, and its predecessor the Atomic Energy Commission ("AEC"), would be unwilling to license this expensive and environmentally costly option so long as the relatively cheap and easy alternative of re-racking at Turkey Point is available.

This may be an accurate statement of the NRC's licensing processes, but it is not equivalent in the Court's view to a firm legal barrier that should excuse Westinghouse from its contractual obligations. According to Westinghouse, the NRC would insist, in effect, that Florida allow Westinghouse to co-opt Florida's on-site property so as to use the cheapest form of interim storage available for Westinghouse's spent fuel, i.e., re-racking. Assuming that this is a correct statement of NRC policy, it works only to Westinghouse's advantage, saving it from the expensive AFR option and making the cheaper re-racking alternative available to it. The Court fails to see how this fact compels any further adjustment in Westinghouse's favor, in the form of a ruling that would force Florida to pay either the re-racking or the ultimate disposal costs of the spent fuel. The Court's prior conclusions in this regard were in error.

However, although the AGNS facility could conceivably have been expanded, the evidence suggests that any attempt to expand the AGNS facility into a full-scale AFR facility would have met intense and possibly insurpassable political opposition. Recent legislation in South Carolina, in which state the AGNS facility is located, conditions the establishment of an AFR facility in that state on the approval of both houses of the state legislature. *See* DX-SF-437, p. I-26. Indeed, proposals for AFR's nationwide have consistently been met with intense local opposition. Westinghouse points out that no one has ever intentionally built an AFR facility anywhere. While this latter fact is probably in large part due to the relative expense of the AFR option vis-a-vis re-racking rather than to external obstacles, political opposition clearly has been influential as well.

In this light, the Court is not prepared to find that Westinghouse could have forced AGNS to convert its facility to a full-scale AFR that could have accepted the Turkey Point spent fuel throughout the life of the 1973-1983 contract between Florida and Westinghouse. Nor is the Court prepared to find that Westinghouse could have built its own AFR to have served that purpose. It would be purely speculative to reach a conclusion in either direction on these two points.

However, Westinghouse has not disturbed the Court's 1981 finding that had Westinghouse acted with diligence, it could have removed some portion of the spent fuel to the existing storage space at the AGNS facility or to similar space at a number of other sites summarized in the experts' report.

More importantly, the Court is satisfied that Westinghouse can now ultimately meet its obligation in reference to removal and disposal of the spent fuel as a consequence of Florida's having contracted with the DoE for its removal to the permanent federal repository. As will be addressed *infra*, Westinghouse's failure and/or inability to remove in timely fashion does not necessarily relieve it of the obligation to remove altogether, or as the Court will decree, reimburse Florida for its cost in connection therewith.

As the Court understands it, there would have been no legal or other obstacle had Westinghouse sought to contract with the DoE in Florida's stead for the removal and disposal of the disputed spent fuel. Indeed, if Westinghouse had succeeded in removing the spent fuel to an interim AFR facility, Westinghouse would have been required to contract with the DoE for its ultimate removal to the federal repository. Accordingly, the Court is satisfied that Westinghouse had as full an opportunity to contract for removal and disposal of the spent fuel to the federal repository as did Florida.

(ii) *Westinghouse urges the Court to find that political rather than commercial factors were responsible for the demise of reprocessing, and that while Westinghouse may have assumed the commercial risks when it signed the contract, it did not assume the political risks, because they were unforeseeable.*

These suggestions require further exploration first of the reasons that reprocessing has failed, and second of the foreseeability of those reasons in 1965. It is certainly true that the 1977 Carter ban and the Ford deferral on reprocessing which occurred in 1976 were unforeseeable. Both actions were in response to a political determination that the increased availability of plutonium would entail an unacceptable risk of nuclear weapons materials slipping into unfriendly hands. The Government's policies of the 1960's were clearly based on a different evaluation of this concern.

However, the evidence indicates that plans for commercial reprocessing facilities were running into complications well before President Ford's 1976 declaration, and also that no such plans have been revived since the ban was lifted in 1981. A number of factors contributed to the failure of reprocessing in the periods prior to 1976 and subsequent to 1981. Categorizing those factors as purely political or purely commercial is not an easy task.

The commercial reprocessing plant at West Valley, New York, which had been open from 1966 to 1972, closed in 1972 for modifications and expansion. While it was closed, its owners assessed its future commercial viability and determined that it would be too expensive to operate in light of new, more stringent safety regulations for reprocessing and the handling of plutonium.

GE had chosen to try a new, experimental method of reprocessing in its Morris facility; its reprocessing plans were abandoned in 1973 when the new method proved unworkable. The AGNS facility being constructed at Barnwell, South Carolina (which was the only other reprocessing plant beyond the hopeful stage at that time) was originally scheduled to have been completed in late 1974, but construction delays pushed

that schedule back to 1976, and then in 1976 its licensing application was delayed pending completion of the so-called "GESMO" proceedings. *See National Resources Defense Council v. NRC*, 539 F.2d 824, 846 (2nd Cir. 1976).

The GESMO study was the NRC's attempt to produce a single general environmental impact statement on the use of recycled plutonium in fuels for nuclear power reactors. The scope of the GESMO study included the entire "back-end" of the fuel cycle, including reprocessing as well as plutonium recycle. The study was to address a wide range of potential impacts, including the health, environmental, and safety effects of reprocessing, of transporting plutonium, and of other steps in the recycle process.

The GESMO study also was to include an analysis of alternative programs for safeguarding plutonium—that is, preventing its illicit use for nuclear explosives or toxic disposal. *See* DX-SF-454; DX-SF-455 p. ES-2. But this safeguards issue was just one of a number that the study was to address.

The GESMO proceedings were suspended indefinitely following the 1977 ban on reprocessing. Westinghouse intimates, in attempting to establish that the 1977 ban cut short otherwise promising plans for reprocessing, that absent the ban, the GESMO proceedings would have ended in results favorable to plutonium recycle. This is by no means clear. Although preliminary NRC staff reports had reached favorable conclusions, other governmental entities had publicly expressed doubts about those reports, and the public hearings and evaluation process was still underway when the ban was issued. To speculate as to what the ultimate outcome would have been would be futile.

Now that the 1977 ban has been lifted, the re-initiation and completion of the GESMO proceedings stand as a key obstacle to the re-kindling of commercial interest in reprocessing. At the very least, those proceedings would yield safety regulations and safeguard requirements for reprocessing and plutonium recycle that would be exceedingly expensive or even prohibitively costly.

In this light, the Court is satisfied that the 1977-1981 ban on reprocessing was just one of the obstacles that blocked the development of commercial reprocessing.

Additionally, the Court is satisfied that the obstacles to reprocessing that developed before 1976 were reasonably foreseeable in 1965. The GESMO proceedings or their substantial equivalent were entirely foreseeable, if not a certainty, as was the prospect that stringent safety regulations and/or technological problems might contribute greatly to the cost of reprocessing.

These conclusions are based on, *inter alia*, the clear evidence that it was foreseeable from the beginning of the private nuclear power industry that the government, through the AEC, would set and enforce safety regulations for the industry. This was part of the announced policy, and a determination that the AEC would be able to do so successfully was a condition of the government's decision to turn the industry over to private hands. When the AEC submitted a legislative proposal to Congress in 1963 to eliminate mandatory government ownership of "special nuclear material," it made specific public assurances that the enactment of the proposed law would not derogate the AEC's authority to control such material "and other materials and facilities under its jurisdiction or to exercise safeguard rights provided under agreements for cooperation with other countries." DX-SF-445, *AEC Annual Report to the Congress for 1963*, p. 17.

It was also clear from the first that the AEC's safety concerns extended to the back-end of the fuel cycle, including transport and disposal of radioactive materials, as well as to reactor operation, and that safety concerns would play a major role in the development of *all* facets of the industry. These facts are evidenced in the following representative quotes from AEC Annual Reports for the mid-1960's:

> Along with the development of technology for nuclear reactors is the concomitant development of safeguards in the design, construction and operation of nuclear reactors and devices for land, sea, and space purposes. These

> safety aspects extend *from the selection of materials through operational procedures to disposal of radioactive materials . . . reactor technology is inextricably bound with all aspects of public safety.*

DX-SF-445, *AEC Annual Report to the Congress for 1963*, p. 163 (emphasis added).

And again:

> The goal of the [AEC's] regulatory program is to ensure through a program of licensing and regulation that the use, *transport and disposal* of radioactive materials, *and the operation of reactors and other nuclear facilities* are conducted in a manner consistent with public health and safety.

DX-SF-447, *AEC Annual Report to the Congress for 1965*, p. 297 (emphasis added).

The Court is also satisfied that it was known that safety regulations might change, and that the AEC would not hesitate to enforce expensive safety requirements, even retroactively. Safety criteria had not yet been fixed in the mid-1960's, and that the AEC made it known that such criteria would be developed and amended on an ongoing basis, "as part of the Commission's continuing program of modifying its regulatory controls on the basis of experience and new knowledge." DX-SF-445, *AEC Annual Report to the Congress for 1963*, p. 11.

The AEC made no commitment that it would allow operations if certain fixed criteria were met or that it would offer indemnification if compliance with safety conditions caused unanticipated loss to the industry. The AEC's Annual Report for 1965 noted that a panel of persons from outside the Government had been appointed to conduct a comprehensive study of the AEC's regulatory program. The panel urged intensified efforts to develop criteria, standards, and codes for the safety evaluations of private nuclear power ventures. The AEC implicitly acknowledged that this was a laudable goal, but stressed the difficulties with trying to fix the criteria early on:

> . . . it is recognized that there may be instances where one or more of the proposed criteria may not be applicable, and also that additional criteria may be needed in other cases. . . . The ultimate goal is the evolution of industry codes based on accumulated knowledge and experience. . . .

DX-SF-447, *AEC Annual Report to the Congress for 1965*, pp. 306-307.

Because there was so much conscious ignorance in the mid-1960's about what safety requirements the Government would ultimately impose, as it released the previously top-security nuclear technology into private hands, the Court is satisfied that it was reasonably foreseeable in 1965 that the safety regulations ultimately imposed might be significantly more restrictive and expensive than initially contemplated.

With regard to reprocessing and plutonium recycle specifically, the industry was commercially ignorant as of 1965. While it is true that reprocessing technology had been demonstrated in government facilities and that the first commercial reprocessing facility was opened shortly before the Westinghouse-Florida contract was signed, these facts alone did not promise success. Operation of private reprocessing facilities entailed numerous uncertainties that neither government operations nor the mere opening of a single facility could answer. The extent and expense of operational safety regulations to be developed for the industry should have been among the more obvious uncertainties.

Additionally, it was widely known that the volume of plutonium that would be produced in commercial facilities, unlike that which had previously been produced in the government facilities, could not all be absorbed by the needs of the government weapons programs. While scientists expected that plutonium recycle as reactor fuel would be feasible, the requisite technology had not yet been developed even to the experimental stage, and hence its potential environmental, health, and safety efforts obviously had not been analysed. A reasonable, informed person should have foreseen that if and when

the technology was mastered, these potential effects might require analysis, which might in turn lead to delays or previously unidentified problems.

Even Florida, with its relative ignorance vis-a-vis Westinghouse about the entire nuclear fuel cycle, recognized in 1965 the extent of the uncertainties about plutonium recycle plans, as evidenced in the following quote from an internal memorandum from one of Florida's contract negotiators written in the summer of 1965:

> As is fairly well-known, the plutonium buy-back picture beyond 1970 is very cloudy, as no one known for sure what demand for plutonium will exist at that time. A number of studies are under way concerning the utilization of plutonium as a fuel in power reactors. *Plutonium is a radioactive product and consequently must be handled in special ways. This will necessarily increase the price of fuel containing plutonium.* It is not known at this time whether or not plutonium can be made into a competitive fuel. The general consensus concerning the prospective use of plutonium for military purposes seems to be that this will be limited in the future.

FPL-SF-85, Gardner Memorandum, pp. 7-8 (emphasis added).

As the underlined portion of the quote suggests, the foreseeable problems with plutonium recycle were not just technical. Indeed, safety and technology issues have always been almost inseparable in the nuclear industry. And because of the known lack of alternative uses for the plutonium beyond the limited military demands, uncertainty about plutonium recycle necessarily meant problems for the entire back-end of the fuel cycle, including reprocessing.

In sum, while the 1977-1981 ban on reprocessing was probably not specifically foreseeable in 1965, other independent developments that stymied reprocessing both before and after the ban were sufficiently foreshadowed in 1965 that a reasonable, informed person, or company, in the nuclear industry should have taken them into account.

- (iii) *Westinghouse urges the Court to find that it was not reasonably foreseeable in 1965 that the removal and disposal clause of the contract might impose a substantial cost burden on Westinghouse.*

In support of this proposition, Westinghouse cites a number of mid-1970's documents indicating that removal and disposal costs had not previously been expected to entail a substantial cost burden. In fact, Westinghouse expected to net a profit of perhaps $16-19 million from removing and disposing of the fuel through reprocessing. This evidence does not, however, indicate whether or not Westinghouse should reasonably have been aware of a *contingency* that removal and disposal costs might be substantial, even though its *expectation* was that they would not be.

Westinghouse has not suggested any low-cost alternative to reprocessing that it could reasonably have expected in 1965 would be available if and when its reprocessing plans were to fail. That is, Westinghouse has not identified any options between the $16-19 million profit that it previously expected from reprocessing and the $70 million or more loss that is now expected. If spent fuel is not reprocessed, long-term storage of some sort appears to be the only alternative, and no one has suggested that long-term storage of the amount of spent fuel involved in this dispute could safely be accomplished for less than the $70 million fee that the DoE is charging for storage in its planned repository.

Indeed, the evidence is clear that it was widely known by at least 1965 that long-term storage facilities for radioactive materials would not be inexpensive. Though the industry was not then planning that spent fuel would be stored for long periods, it was then planning that radioactive wastes from reprocessing plants would be stored for the indefinite future. At the time, the radioactive wastes that had been produced in government reprocessing facilities were being stored on an interim basis in temporary storage bins located beneath the facilities. Those bins were expensive, and had to be replaced

every twenty years or so. The commercial reprocessing facilities were expected to use the same methods for the short term.

Research into the best and most economical means for permanently storing the materials was described in AEC Annual Reports for the mid-1960's as "continuing." *See, e.g.*, DX-SF-445, *AEC Annual Report to the Congress for 1963*, p. 166. Notably, the potential solutions being evaluated were conceptually of the same sort as the Government has now chosen for disposal of spent fuel—deep burial sites.

There was some suggestion in the testimony at the liability trial that the industry contemplated in 1965 that reprocessing facilities would be operated at a loss as a means of disposing of the spent fuel, even if reprocessing were to fail as a commercial venture. The suggestion was that long-term storage of the end-products of reprocessing might be cheaper than storage of spent fuel by a sufficient margin that the expense of the reprocessing plant could be justified on the grounds that it would minimize disposal costs, even if the end-products could not be re-cycled. This possibility becomes more realistic if it is assumed that the uranium end-product could be re-cycled and consequently that only the plutonium and radioactive wastes would require storage.

However, a mere showing that this method of disposal would be cheaper than the currently available method would not alone substantiate Westinghouse's claim that removal and disposal was not expected to impose a substantial cost burden. No one has suggested that the total foreseeable costs of this means of disposal were low—only that they might be somewhat lower than the high costs of spent fuel storage. Hence, it cannot be claimed that the current high costs are totally out of proportion to what this expense was expected to be. In any event, Westinghouse has not submitted any cost estimates on this method of disposal, either from 1965 or from current analyses. Accordingly, Westinghouse cannot, at least not on this record, point to this option to show that the industry reasonably contemplated in 1965 that some low-cost means of removal and disposal would be available should commercial reprocessing be unavailable.

One additional possibility that Westinghouse may have contemplated in 1965 as a "low-cost" back-up to commercial reprocessing was the possibility that the Government would take spent fuel off the industry's hands at little or no cost to the industry if commercial reprocessing were to fail. In fact, Westinghouse implies that the Government promised that it would do just that, as part of its program to encourage private use of nuclear power. This possibility is best addressed separately, along with other assertions Westinghouse has made about the Government's policies in 1965.

(iv) *Westinghouse urges the Court to find that a series of Government actions which were unforeseeable in 1965 caused the difficulties with reprocessing and removal that developed in the 1970's.*

The significance of the 1977-1981 ban and of the GESMO proceedings on the plans for reprocessing have already been addressed. Beyond those, both the Government actions referenced and Westinghouses's complaints about them become somewhat amorphous. The argument appears to be that the Government assured the nuclear industry, from 1957 on through the 1960's, that neither removal nor any other aspect of the disposition of spent fuel would entail substantial costs for the industry, and that the Government backed this assurance with a promise that it would assume responsibility for commercial spent fuel at little or no cost if the industry were unable to do so. Governmental actions (and inactions, implicitly) in the late 1970's and 1980's represented an unforeseeable failure to make good on this earlier promise, Westinghouse contends.

A review of the evidence suggests that there is some limited validity to Westinghouse's position in this regard, but that neither the Government's earlier assurances nor its later failures were as extreme as Westinghouse's contentions suggest.

The specific evidence that Westinghouse cites to show that the Government promised to assume responsibility for commercial spent fuel if the industry were unable to do so relates to an AEC policy announced in 1957 regarding reprocessing.

Therein the government agreed to accept privately generated spent fuel for reprocessing unless and until commercial reprocessing services became available on reasonable terms and conditions. The Government would charge a fee for the service, and the regulation states that the fee would be based upon the costs estimated to be associated with a hypothetical commercial reprocessing facility. The end-products of the process would belong to the Government, and the user of the service would be credited with the value of those end-products to be determined in accordance with the AEC's guaranteed purchase prices for those materials.

This policy was to expire by its own terms on June 30, 1967. On January 2, 1968 the policy was renewed for an additional three years with the same basic elements, to expire December 31, 1970.

Westinghouse asserts that the policy was not again renewed in 1970 because the AEC had determined that the private reprocessing industry was sufficiently viable. The evidence Westinghouse relies on for this point does not express any AEC determination to that effect, nor does it expressly address why the policy was or was not renewed after 1970. However, it does suggest that the principle underlying the earlier policies, i.e. that government would provide the necessary services if the industry were unable to do so, remained in effect although the policy was not renewed.

It should be noted that as of 1963, the AEC's guaranteed purchase prices for the reprocessing end-products (plutonium and uranium 233) were established at levels not to exceed their estimated value as fuel in nuclear reactors.[3] Earlier the plutonium prices had been based on the higher weapons value rather than the estimated fuel value. The change was based on a

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3 The AEC's policy as of 1964 was that guaranteed purchase prices for the plutonium and uranium end-products would be established only during the time required to develop and demonstrate the fuel application of these materials, which was expected to be by the mid-1970's. The plutonium guarantee at that time had been extended only through December 31, 1970. *See* DX-SF-446, *AEC Annual Report to the Congress for 1964*, p. 14.

determination that the latter was "the proper basis for the design and operation of civilian reactors and for the economic evaluation of nuclear power, rather than the higher plutonium price based on weapon value which was in effect through June 30, 1963." DX-SF-445, *AEC Annual Report to Congress for 1963*, p. 18.

The significance of this information is that it clarifies the nature of the offer the Government was making in the 1957 policy and the 1967 renewal thereof. Those policies involved the Government providing a service, in exchange for a reprocessing for less a credit for the reprocessing end-products. The reprocessing fee was to be based on the estimated cost of a commercial reprocessing facility, and the credit for the end products was to be based on their estimated commercial value. Accordingly, the underlying principle was that the Government would provide the necessary services *at their estimated cost* if the industry was not able to do so at the time the services were required. The promise was not to provide the services at a subsidized level should the services turn out to be expensive.

This interpretation is compatible with the AEC's general policies toward the nuclear power industry in the mid-1960's. Westinghouse is clearly correct that the Government was promoting private reprocessing and the nuclear industry generally during this period. The Government obviously believed that the nuclear industry, and specifically reprocessing, could be commercially viable, and it sought to convince the business community that this belief was well-grounded.

However, its promotional efforts never rose to the level of an assurance of commercial viability. Indeed, one of the stated goals of the Government's policy was to generate sufficient experience to enable the AEC to evaluate whether or not nuclear power had practical value in this application. Given that this was an acknowledged open question, the AEC was in no position to guarantee the industry's viability, and it did not do so.

The Government's promotional methods generally were to offer to supply the industry the services needed for any stage of the fuel cycle for which services were not yet commercially

available, be it uranium enrichment, fuel fabrication, reprocessing, plutonium buy-back, waste disposal, etc. When a given service became available from a private source at a competitive (i.e. non-monopoly, cost-based) price, the Government would withdraw its offer with respect to that service. All the while, the Government would charge a fee for the service designed to cover the Government's cost and to enable the industry to properly evaluate the commercial potential of nuclear power.

Significantly, the Government's offers rarely if ever mentioned a fixed amount for the fee. Instead, the offers typically would state only the method and assumptions that would be used to fix the fee on a case-by-case basis. The industry was left to its own devices in terms of predicting what the services would actually cost.

The government's stated object as of 1964 was to assist with some of the start-up difficulties of the new industry, so that the free market economy could then test the capabilities of nuclear power against those of other sources of power. The AEC explained this purpose in connection with the legislation it proposed to Congress in 1963, which was later enacted as the Private Ownership Act of 1964, as follows:

> (2) [to] allow and eventually require electric utilities to obtain nuclear power under more nearly the same economic conditions that apply to coal, oil, and natural gas and thus permit a more realistic comparison of commercial aspects of nuclear and conventional power. Competitive nuclear power cannot really be demonstrated until normal economic factors relating to ownership and uses of nuclear fuels exist.

DX-SF-445, *AEC Annual Report to the Congress for 1963*, p. 18.

In this light, the lack of a subsidy in the AEC policies discussed would appear appropriate, and indeed an implicit subsidy would have appeared inappropriate. Accordingly, to the extent that Westinghouse may reasonably have inferred from the policies of the 1950's and 1960's that the Government

would take responsibility for spent fuel in the 1970's if the industry proved unable to do so, Westinghouse should also have inferred that the Government would charge a cost-based fee for whatever services it provided.

Fairness dictates that the Court consider whether and to what extent the Government's policies of the 1970's and after have deviated from what Westinghouse could reasonably have expected. Westinghouse's claims about the Government's actions regarding reprocessing have already been addressed. Leaving them aside, the first Government action regarding spent fuel in the 1970's was the DoE's announcement in October of 1977 of a government proposal to accept and take title to spent fuel for interim and long-term storage, in return for a one-time storage fee. The storage fee was to be calculated to cover the full costs of the interim storage and ultimate disposal. The DoE described this proposal as "a logical extension, given the indefinite deferral of reprocessing, of the long-established federal responsibility for permanent disposal of high-level wastes." DX-SF-219, DoE Press Release October 18, 1977, "DoE announces New Spent Nuclear Fuel Policy."

The announcement of the policy was followed in July of 1978 by an announcement of rough estimates of what the disposal fees would be. Assuming that Turkey Point is a typical-sized reactor, these estimates would translate into a combined interim and permanent disposal fee of roughly $7 million for the amount of spent fuel generated each year.[4] Had the Government proceeded with the 1977 plan, then, the spent fuel disputed in this case—which is ten years' worth—could have been turned over to the Government for a fee on the order of $70 million. This amount is not substantially less than

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4 *See* DX-SF-462, "Federal Facilities for Storing Spent Fuel—Are They Needed?," Report by the Comptroller General to Congress, June 27, 1979, p. 19. Actually the reactor units at Turkey Point must be smaller than the typical reactor on which this report bases its estimates, as the Turkey Point Units each appear to discharge roughly half the annual volume of spent fuel that the report assumed. However, the total annual discharge of the two Turkey Point units appears roughly equal to that of the typical reactor on which the report based its estimates.

the almost $100 million that Florida now says interim and permanent storage will cost.

Despite the provisions for passing these substantial costs on to the industry, Westinghouse makes no complaint about the 1977 policy except that it was abandoned. In fact, Westinghouse quotes with approval the DoE statement that this policy was a logical extension of the federal government's earlier policies on which it had relied.

From 1977 to 1981, the Government explored ways to carry through with the policy announced in 1977. There was a temporary reversal in 1981 during which the executive branch allegedly took the position that the spent fuel was solely private industry's problem. But in early 1983, Congress passed the NWPA of 1982, which in fact had been under consideration since at least early 1981. This Act in large part is a fulfillment of the Government's earlier commitments regarding spent fuel. It is consistent with the program announced in 1977 in that the Government agrees to accept and take title to the spent fuel in exchange for a one-time, cost-based disposal fee, which program in turn was a logical extension of the Government's position in the 1960's, as Westinghouse acknowledges.

The 1982 Act modifies the program announced in 1977 regarding the interim storage of spent fuel, by encouraging on-site storage to the maximum extent possible, with federal AFR space only for spent fuel that cannot feasibly be stored on-site. This modification, however, was compelled by a determination that interim storage on-site would be cheaper and easier than interim storage off-site, and hence it works only to the advantage of the parties who would be paying the costs either way.

A second modification is in the area of timing. Whereas the 1977 proposal implied that the Government would accept spent fuel within five years after the policy was adopted, the NWPA states that the permanent federal repository will not be available until at least 1998.

In fact, this delay is indicative of longer total slippage in the timing of the Government's fulfillment of its implied commitment. The original understanding was that the Government would provide the services *when needed* if the industry were

unable to do so. Hence to have fulfilled this commitment, the Government should have been prepared to accept private spent fuel whether for reprocessing or disposal, as early as the mid-1970's, when the prospects for commercial reprocessing began to falter. The Government will be 20-25 years behind that schedule if the federal repository becomes available in 1998 as planned, and if, as the parties suspect, the repository is not available on time, the total delay will be even greater.

Perhaps Westinghouse should reasonably have been aware in the mid-1960's that the Government might not be in a position to take the spent fuel off the industry's hands immediately if and when industry became unable to do so, but Westinghouse could reasonably have assumed that the service would have been available in a commercially reasonable time so as to minimize expenditures on temporary, stop-gap solutions such as interim storage. Hence, Westinghouse is correct in asserting that the Government unforeseeably did not fulfill this timeliness aspect of its implied commitment to the industry.

D. Equitable Adjustment Factors

Westinghouse asserts that it has already expended roughly $180 million in performing its fuel contract with Florida but has received revenues of less than $164 million; hence Westinghouse has already incurred losses in excess of $16 million as a result of the contract. On the other hand, Westinghouse asserts, Florida's ratepayers have already saved approximately $1.3 billion as a result of the contract and the use of nuclear power instead of fossil fuel at Turkey Point, and they are expected to save an additional $5.2 billion by 1992.

Florida quibbles with several of the precise figures put forth, but its only substantial comment is that in evaluating Westinghouse's losses the fuel contract should be considered only in conjunction with the two Turkey Point plant contracts between Florida and Westinghouse. The evidence confirms Florida's assertion that the three contracts were entered into at the same time as part of a single deal and hence should be considered together. Totalling the figures for the three contracts, West-

inghouse has incurred costs of $224 million and received revenues of $236 million, with a net loss of $12 million. A number of equitable factors are not reflected in these figures, such as the intangible costs Florida has incurred and the intangible benefits Westinghouse hoped to gain from the contract. These factors were described in the 1981 decision and need not be repeated here.

Analysis

The extensive consideration of the factual developments reflected in the summary *supra* has resulted in relatively little change in the Court's legal conclusions from 1981. The 1981 decision was intended to thoroughly and accurately set out the law on commercial impracticability and the related common law defenses that govern this case, and it will not be repeated here. As to whether the Court's intention was fulfilled must be left to a higher authority.

However, before proceeding to apply the principles to the facts as found, a new legal argument that Westinghouse has raised needs to be addressed. This argument, based on the doctrine announced in *Hadley v. Baxendale*, 9 Exch. 341, 156 Eng. Rep. 145 (1854), had substantial appeal on first examination, but the Court has now determined that the law relied on is inapposite to the issues that the facts pose here. In concluding otherwise the Court was wrong—unequivocally wrong. The Court takes some solace in the fact that the advocacy which led the Court to its erroneous conclusion was exceptional. Nevertheless, litigants are entitled to a judge's best effort and the awkwardness of admitting error is neither an excuse nor a deterrant.

Westinghouse argues that the damages for which Florida now seeks compensation are unforeseeable consequential damages, just as the lost profits of the mill owner in *Hadley* were unforeseeable consequential damages of the delivery person's failure to deliver the broken shaft to the repair shop as promptly as he had promised.

Under this analysis, Westinghouse argues, the key factual issue is whether the damages that Florida now seeks were foreseeable when the contract was made in 1965. Because no one foresaw that removal and disposal would cost the extraordinary amount now contemplated, Westinghouse, so its argument goes, is not liable for that amount.

The Court is now satisfied that this approach is misguided, and the reason is difficult to comprehend only because of its simplicity: the damages that Florida is seeking are not consequential at all. Westinghouse contracted to remove and dispose, but failed to do so. Florida now seeks the cost of removal and disposal, i.e., of obtaining "cover" for Westinghouse's breach. These are damages, with minor exception, of the most direct sort imaginable. Perhaps one or two of the items in Florida's itemization might be properly labelled consequential. For instance, the property tax increase that building new storage facilities at Turkey Point generated might fairly be described as consequential damage. But the most significant disputed item is the $70 million disposal fee that Florida must pay the United States to remove and dispose of Florida's spent fuel.There is simply nothing consequential about it.

Indeed, there is nothing unforeseeable about the damages except perhaps the amount: it was not only foreseeable but a virtual certainty that if Westinghouse failed to remove and dispose, Florida would suffer damages in the amount necessary to obtain removal and disposal from some other source. This is in fact the definitional difference between direct and consequential damages. The former are kinds of damages that are so certain to follow that it makes no sense to ask whether they were foreseeable. Uncertainty in the amount, rather than the kind, of damage is not the sort of uncertainty that *Hadley* addresses. The foreseeability of the amount of direct damages—i.e. the foreseeability of the cost of obtaining "cover"—has potential legal significance in a commercial impracticability analysis, but it has no place in a *Hadley* analysis.

The proper analogy between the instant facts and the *Hadley* facts would be to suppose that the delivery person in *Hadley* had been unwilling and/or unable to perform his delivery promise at all, due to a series of events that he claimed were unforeseeable at the time he made the contract—perhaps, illustratively, war broke out on the ordinary delivery route. Suppose then that the mill owner obtained delivery service from another source, but that the price he had to pay for it was quite high—perhaps for the same reasons that the original delivery person had not performed.

If the mill owner were then to sue the delivery person, not for the mill's lost profits, as happened in the actual *Hadley* facts, but for the price paid for the substitute delivery service, clearly the delivery person could not argue under *Hadley* principles that the price paid for the substitute delivery service was an unforeseeable consequential damage of this breach. He promised to deliver the shaft; he did not do so; and the mill owner seeks nothing but the cost of substitute performance. The delivery person may have a commercial impracticability defense, but if he argued that the cost of substitute delivery service was an unforeseeable consequential damage, he would, in this Court, be destined to fail.

None of the cases that Westinghouse cites in support of its *Hadley* argument involved situations in which a breaching promisor sought to avoid paying the promisee for the cost of substitute performance because that cost was unforeseeably high. In fact, in most of those cases, as in *Hadley*, the promisor had performed his promise, but had done so inadequately or late. The promisee did not contest his obligation to pay the contract price for the performance, but he sought compensation for extra expenditures he had incurred that he attributed to the inadequacy or delay in performance. *Skibs A/S Gylfe v. Hyman-Michaels Co.*, 438 F.2d 803 (6th Cir. 1971); *Barnard-Curtiss Co. v. United States*, 257 F.2d 565 (10th Cir. 1958); *Alex v. Henry S. Conrey, Inc.*, 380 F. Supp. 1147, 1151-52 (E.D. Pa. 1974), *aff'd without opinion*, 511 F.2d 1392 (3rd Cir. 1975). Here, Westinghouse has not performed merely inadequately or late; it has not performed at all.

The Restatement (Second) of Contracts addresses this issue as follows:

> (1) Damages are not recoverable for loss that the party in breach did not have reason to foresee as a probable result of the breach when the contract was made.
>
> (2) Loss may be foreseeable as a probable result of a breach because it follows from the breach
>
> in the ordinary course of events, or
>
> As a result of special circumstances, beyond the ordinary course of events, that the party in breach had a reason to know.

Restatement (Second) of Contracts § 351 (1981).

The language of the Restatement—focusing as it does on the foreseeability of the *loss* rather than the foreseeability of the *damages*—supports the Court's interpretation that the *Hadley* foreseeability test is to be applied to the kind, not the amount, of damage. The Court has no doubt that the kind of loss for which Florida now seeks a damages award was the sort that follows in the ordinary course of events upon Westinghouse's failure to perform.

Hence the case will turn on the Court's resolution of the commercial impracticability and related defenses. The Uniform Commercial Code summarizes all the factors relevant to the defense of commercial impracticability and the related Florida common law defenses in a single sentence, as follows:

> Except so far as a [promisor] may have assumed a greater obligation and subject to the preceding section on substituted performance: . . . delay in [performance] or [non-performance] . . . . is not a breach of his duty . . . if performance as agreed has been made impracticable by the occurrence of a contingency the non-occurrence of which was a basic assumption on which the contract was made . . . .

Fla. Stat. 672.615.

I

Westinghouse proposes that an unforeseeable political determination regarding reprocessing was responsible for the demise of reprocessing, which in turn has made performance of Westinghouse's obligation to "remove and dispose" either impossible or unforeseeably expensive.

The Court agrees that the ban on reprocessing in effect from 1977 to 1981 resulted from a political determination about the national security risks of reprocessing, and also that this ban was not specifically foreseeable. For a number of reasons, however, the Court is satisfied that this unforeseeable contingency does not excuse Westinghouse from its obligation to remove and dispose.

To show that this unforeseeable contingency amounts to commercial impracticability, Westinghouse must show among other things that it was a basic assumption of the contract that reprocessing would not become unavailable on purely political grounds. Unlike the various commercial and technological risks of reprocessing and plutonium recycle, the evidence does not reveal a conscious awareness on Florida's part of this risk, and consequently there was no attempt to allocate this particular risk explicitly to Westinghouse.

However, Florida's general "suit of clothes" negotiating strategy would appear to encompass this sort of risk as well. As found in the 1981 decision, one of the basic and mutual assumptions of the contract was that Florida would have "no involvement whatever with reprocessing, or with whatever alternative disposition Westinghouse might make of the spent fuel." 517 F. Supp. at 455. The new evidence and arguments have not suggested any reason why this finding should be revised. When this basic and mutual assumption is kept in mind, the inference from the unforeseeability of the ban to an implied basic assumption of the contract that there would be no such ban is not direct. This is particularly so in light of Westinghouse's evidenced willingness in 1965 to take abnormal risks, both known and unknown, and Florida's cautious insis-

tence that it costs not be tied to any of the uncertainties surrounding nuclear power.

In any event, the case does not turn on the resolution of this issue, because Westinghouse has failed to convince the Court that the political ban on reprocessing was the key cause of its unavailability. As discussed *supra*, a conglomerate of foreseeable commercial, technological, and safety considerations delayed the development of reprocessing before the ban and have prevented its development since the ban was lifted.

The nuclear industry of 1965 stands in marked contrast to the sewerage business of 1917 in this regard. *See Kansas City, Missouri v. Kansas City, Kansas*, 393 F. Supp. 1 (W.D. Mo. 1975). In that case, the contract entered into in 1917 provided that one city would receive and dispose of the other's sewage. At the time, this required no more than channeling the sewage through the promisor city's pipes to the river. In the 1970's, federal pollution laws required the promisor city to build an expensive waste water treatment plant to treat sewage that it had previously dumped directly into the river. The promisor city sought to impose a proportionate share of the cost of the plant on the promisee city. The promisee city relied on the 1917 contract, and the promisor city claimed commercial impracticability as to it.

In the suit that followed, both parties conceded that neither of them had foreseen in 1917 the sewage treatment requirements that federal law was to impose in the 1970's. The Court further found that, "Indeed . . . the parties in fact did not foresee the possibility that any pollution controls whatever would ever be imposed." *Kansas City*, 393 F. Supp. at 5. Accordingly, the Court found the promisor excused by commercial impracticability from performing the 1917 contract without additional compensation.

In the instant situation, the industry knew in 1965 that federal regulation and control was to be intensive, and it further knew that the precise requirements that would ultimately be imposed were not yet fixed. A reasonable informed business person in the industry would have known that the precise requirements were subject to change and would also

have been aware that the extent of the changes to be made were unknown. *Compare Eastern Air Lines, Inc. v. Gulf Oil Corp.*, 415 F. Supp. 429, 454 (S.D. Fla. 1975) (Gulf was aware of the constantly changing government price regulations for oil).

Accordingly, AEC/NRC studies and regulations regarding reprocessing, which made performance of Westinghouse's "remove and dispose" obligation more difficult or expensive but which fell short of preventing performance, would not be grounds for releasing Westinghouse from its obligations here. They were reasonably foreseeable, and the promisor "is presumed, in the absence of evidence to the contrary, to have agreed to bear any loss occasioned by an event which was foreseeable at the time of contracting." *Eastern Air Lines, Inc. v. McDonnell Douglas Corp.*, 532 F.2d 957 (5th Cir. 1976).[5] Here "evidence to the contrary" is totally absent; indeed the evidence strongly supports the presumption.

II

Westinghouse contends that performance as agreed of its removal and disposal obligation has been rendered impossible by the unavailability not only of reprocessing but also of any other means of removal.

As discussed *supra*, Westinghouse has not convinced the Court that it could not have removed at least some of the spent fuel exactly as agreed—i.e. within six months to a year—had it energetically attended to its contract obligations in the early 1970's. And regardless of this conclusion, it is now possible to secure removal and disposal services for all of the disputed spent fuel through Florida's contract with the DoE for its disposal pursuant to the NWPA.

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5 This phrase was incorrectly quoted in the 1981 decision, 517 F. Supp. at 455. The error was merely typographical, and the Court's analysis was based on the correct quote.

Westinghouse contends that this latter option is not removal "as agreed," because the parties' implicit agreement was that removal would take place within six months to a year, whereas the federal repository will not be available until at least 1998. The Court stands by its earlier finding of an implicit agreement that removal would take place within six months to a year, and hence agrees that performance via a contract pursuant to the NWPA would not be performance exactly "as agreed." However, the fact that a promisor is unable to perform on time would not ordinarily excuse it from the obligation to perform altogether. Rather, the promisor should be obliged to perform as soon as it reasonably can do so.

The implicit timeliness clause in the instant contract is more reasonably understood as a secondary promise than as an exclusive method of, or condition precedent to, performance. Spent fuel simply will not go away on its own with time. The parties, in obligating Westinghouse to remove on a certain schedule, could not reasonably have intended that Westinghouse would be freed of the removal obligation altogether if the schedule could not be met.

Especially in light of the fact that Westinghouse agreed to remove and dispose of the spent fuel in conscious ignorance of how it would do so should reprocessing prove unworkable, the practicability of performance by alternative means should be judged relatively strictly. *See Translantic Financing Corp. v. United States*, 363 F.2d 312, 319 (D.C. Cir. 1966). In that case, the shipper claimed that performance by the route contemplated—through the Suez canal—was impossible. The Court held the shipper to performance by a commercially practicable alternative route. Although on the facts before it the Court found that use of the Suez route was just "an implied expectation" rather than an agreed-upon method of performance, the Court made clear that its ruling could apply even if there was an express expectation or agreement as to the method of performance. *See Translantic*, 363 F.2d at 317 and n. 9; *see also American Trading and Production Co. v. Shell International Marine, Ltd.*, 453 F.2d 939 (2nd Cir. 1972); Fla. Stat. 672.614.

The key would be the intent of the parties at the time of contracting, and the Court is satisfied that had they addressed this issue, the instant parties would have intended performance as soon after six months to a year as possible, should performance on that schedule become impossible. Consequently, the Court will, in the absence of a commercial impracticability defense, hold Westinghouse to performance via the disposal method fixed in the NWPA.

III

This leads to the question of whether unforeseeable contingencies have made performance of the "remove and dispose" clause so expensive as to rise to the level of commercial impracticability. Leaving aside for the moment inquiries into the foreseeability of the contingencies suggested, the Court is satisfied that the expense in this case is not so extreme as to constitute commercial impracticability.

The law on this point is summarized in "Comment d" to the Restatement 2nd on Contracts, § 261 (1981) as follows:

> Performance may be impracticable because extreme and unreasonable difficulty, expense, injury, or loss to one of the parties involved. However, . . . a mere change in the degree of difficulty or expense . . . , unless well beyond the normal range, does not amount to impracticability . . . .

There is no question that the $70 million cost of disposing of the spent fuel in the DoE repository is high; in combination with the $17 million for the first re-racking and consequential damages that Florida seeks, the total cost is very high. However, the significance of these figures must be evaluated in context.

Westinghouse's total revenues over the three connected contracts it signed with Florida in 1965 were approximately $224 million. This figure does not reflect revenues from subsidiary service contracts nor the intangible benefits Westinghouse re-

ceived. The maximum cost of performing the removal and disposal obligation, therefore, is in the range of 40-45% of contract revenues. Westinghouse has already expended $236 million in costs on the contracts, and hence if it is found liable for the full amounts Florida seeks, its total losses will be just under 50% of total contract revenues.

While this expense is high, it is not beyond the normal range of risk that a promisor signing a fixed-price contract in a new high-risk field could have expected. A loss alone is not sufficient to show commercial impracticability. Using the total revenues on the three contracts as an indicator of the range of Westinghouse's financial dealing, a loss on the order of $87 million would not be totally out of proportion to the amounts in which Westinghouse has chosen to deal. Courts usually have rejected commercial impracticability claims where cost increases were in this range relative to the total revenues and costs. *See American Trading v. Shell International*, 453 F.2d at 942 (2nd Cir. 1972), (increase in costs of one-third over agreed price of contract not commercial impracticability; citing English cases in which 50% and 100% increases in costs were not adequate to establish impracticability).

If Westinghouse had conducted any investigation whatsoever in 1965 as to what costs would be incurred for removal and disposal should the contemplated reprocessing ventures fail, it would have been aware that the expense might be great. Accordingly, Westinghouse's surprise at the high cost is attributable more to its own failure in 1965 to study and evaluate the potential costs than to any unforeseeable contingencies. An argument to the effect that any such potential costs were either unknown or incapable of ascertainment simply strengthens the Court's conclusion that a reasonable company in the nuclear business would have recognized and appreciated the potentially high cost.

IV

Westinghouse contends that a series of Government actions in the 1970's and 1980's have rendered performance of the "remove and dispose" obligation impossible and/or impracticable. As discussed *supra*, the Court rejects for the most part Westinghouse's factual contentions in this regard. All that remains to be addressed is the significance of the fact that the Government did not act in a timely fashion in honoring its implied commitment regarding spent fuel.

The Court is satisfied that this failing on the part of the Government was an unforeseeable contingency the non-occurrence of which was a basic assumption of the contract and which has rendered performance of Westinghouse's implicit timeliness obligation to Florida impossible. No one could have anticipated the poor planning, delays, and policy reversals that have added up to more than twenty years of delay, after the outlook for commercial reprocessing became clouded, before the Government will be providing any alternative. Both Florida and Westinghouse were aware that reprocessing might not be available, but neither of them anticipated that no alternative means of removal would be available until 1998 or after. This assumption can be inferred from their mutual agreement to build only six months to a year's worth of capacity into the original storage facilities at Turkey Point.

This conclusion is not dependent on a finding that Government policy deficiencies were responsible for the unavailability of AFR storage in the 1970's and after. The Court stands by its conclusion that AFR sites were not developed primarily because on-site interim storage turned out to be cheaper and easier. The failing in the Government's policies was that a permanent means of disposal was not available in time to avoid *unnecessary* costs for interim storage *either* on-site *or* off-site. While perhaps some amount of interim storage would have been required even if the Government had pursued a consistent, rational policy throughout, the Court is satisfied that at least some of the interim storage costs must be attributed solely to unnecessary delays in the fulfillment of the

Government's implied commitments. Westinghouse cannot fairly be held liable for the full amount of these unnecessary costs.

Consequently, the Court has determined that an equitable allocation of the interim storage costs is in order. The Court has been given no reason to suspect that the costs of the permanent federal repository have been increased by the delays, hence the DoE disposal fee will not be allocated.

Conclusion

In making the allocation, the Court must of necessity utilize its own sense of fairness. There is no precise means for isolating the costs attributable to the unforeseeable delays. The fact that Florida's ratepayers have benefitted enormously from the use of nuclear power weighs heavily in favor of allocating these costs to Florida, who presumably will be able to pass them on to its ratepayers. On the other hand, as Florida has pointed out, Florida (and its ratepayers, presumably) will bear the potentially substantial burden of any further delays or uncertainties that develop in the Government's plans.

Additionally, if all the interim storage costs were allocated to Florida, Westinghouse would in effect be rewarded for its lack of diligence in the early 1970's, for if Westinghouse had removed some quantity of spent fuel from Turkey Point to an off-site location, which the Court found it probably could have done, then Westinghouse would have incurred the interim storage costs for that portion directly. On the other hand, the second reracking will give Florida sufficient interim storage space for its own spent fuel as well as for the ten years' worth of spent fuel that Westinghouse contracted to remove.

Considering these factors, the Court has determined it appropriate to divide the costs of the two re-rackings at Turkey Point between the parties. Without attempting mathematical precision, the allocation will divide the costs roughly as if Westinghouse were absorbing the costs of the first re-racking and Florida absorbing the costs of the second. Because West-

inghouse has in fact already agreed, for reasons independent of those that counselled this allocation to the Court, to perform the second re-racking at Turkey Point at no cost to Florida, the Court will set off against Westinghouse's other liabilities an amount equal to the estimated cost of the second re-racking.[6]

Florida seeks a number of elements of damages beyond the re-racking costs and the permanent disposal fees. The property tax and insurance premium increases at Turkey Point are largely attributable to the unforeseeable delay in the availability of the permanent disposal site. The property tax increase additionally is an unforeseeable consequential damage of the failure to remove.

Florida incurred the consultants' fees for which it seeks recompense as part of its efforts to settle and/or prevail in the remedies stage of this litigation; as such the fees are properly considered one of the unavoidable costs of litigation, as to which each party must bear its own.

Accordingly, the Court is not satisfied that Westinghouse should be held liable for any of these additional elements of damages.

In sum, Westinghouse will be held liable for the $70 million permanent disposal fee and for the cost of the first re-racking, including the cost of cask rentals and interest, against which Westinghouse will be credited roughly $12.7 million for performing the second re-racking. The additional damage elements that Florida seeks will be denied.

The sums aforementioned are not intended to be precise. The Court is satisfied that the parties, who have worked so diligently toward settling their differences, will now be able to draft an appropriate decree in accord with the Court's view as expressed herein. It may well be, for example, that Westinghouse can simply assume Florida's obligation under the con-

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6 For reasons not completely clear to the Court, the evidence is that Westinghouse will be able to perform the second re-racking for an estimated cost of $6 million, but that the same re-racking would have cost Florida an estimated $12.7 million if Westinghouse had not agreed to perform it. The Court will credit the full $12.7 million against Westinghouse's liabilities to Florida.

tract with DoE—a contingency which might well inure to their mutual benefit.

An appropriate order will issue.

/s/ ROBERT R. MERHIGE, JR.
UNITED STATES DISTRICT JUDGE

Date: November 8, 1984

APPENDIX D

Judgment of the United States Court of Appeals for the Fourth Circuit

UNITED STATES COURT OF APPEALS

FOR THE FOURTH CIRCUIT

No. 85-1089

Filed August 12, 1987

FLORIDA POWER & LIGHT COMPANY,

Appellee,

v.

WESTINGHOUSE ELECTRIC CORPORATION,

Appellant.

Appeal from the United States District Court
for the District of Virginia.

This cause came on to be heard on the record from the United States District Court for the Eastern District of Virginia, and was argued by counsel.

JUDGMENT

On consideration whereof, It is now here ordered and adjudged by this Court that the judgment of the said District Court appealed from, in this cause, be, and the same is hereby, affirmed in part and reversed in part.

/s/ JOHN M. GREACEN
Clerk

APPENDIX E

Order on Petition for Rehearing with Suggestion for Rehearing in Banc of the United States Court of Appeals for the Fourth Circuit

UNITED STATES COURT OF APPEALS

FOR THE FOURTH CIRCUIT

No. 85-1089

Filed November 30, 1987

FLORIDA POWER & LIGHT COMPANY,

Appellee,

versus

WESTINGHOUSE ELECTRIC CORPORATION,

Appellant.

On Petition for Rehearing with Suggestion for Rehearing In Banc.

ORDER

The appellee's petition for rehearing and suggestion for rehearing in banc were submitted to this Court. As no member of the Court requested a poll on the suggestion for rehearing in banc, and

As the panel considered the petition for rehearing and is of the opinion that it should be denied,

IT IS ORDERED that the petition for rehearing and suggestion for rehearing in banc are denied.

Entered at the direction of Judge Russell, with the concurrence of Judge Widener and Judge Butzner.

For the Court,

/s/ JOHN M. GREACEN
Clerk

Appendix F

Sampling of Petitions for Certiorari Filed During the 1986 and 1987 Terms of the Supreme Court Requesting Enforcement of Rule 52(a)

1. *Levy v. Exxon Corp.*, Case No. 87-812, 56 U.S.L.W. 3444 (filed 11/4/87, cert. denied 1/12/88).

Question presented: Is court below empowered to make findings of fact in first instance under Fed.R.Civ.P. 52(a) where findings in question were not addressed by federal district court because of error of law?

2. *Kilpatrick v. U.S.*, Case No. 87-602, 56 U.S.L.W. 3358 (filed 10/13/87, cert. granted 1/12/88).

Question presented: . . . (2) May federal court of appeals substitute its own findings of fact even when facts found by district court were specifically premised on credibility determinations based on live testimony?

3. *Pollard v. Rea Magnet Wire Co. Inc.*, Case No. 87-591, 56 U.S.L.W. 3359 (filed 10/10/87, cert. denied 12/8/87).

Question presented: (1) Did court below violate precedent established by this Court in Anderson v. Bessemer City, 470 U.S. 564, 53 LW 4314 (1985), by substituting its own judgment concerning nature of plaintiff's proof at trial for that of federal district court, which found that plaintiff had proven violation of Title VII of 1964 Civil Rights Act?

4. *Insurance Co. of North America v. Globe Tankers*, Case No. 87-561, 56 U.S.L.W. 3376 (filed 10/6/87, cert. denied 12/18/87).

Question presented: (1) Did Second Circuit, in disregard of Anderson v. Bessemer City, 470 U.S. 564, 53 LW 4314 (1985), exceed its authority under Fed.R.Civ.P. 52(a) by holding that trial court erred in using shoreside measurements to determine

tanker owners' liability for cargo loss, although record showed and trial court found that: (a) high precision shoreside measuring gauges accurately quantified amount of cargo discharged at legal delivery point, (b) on board draft survey estimates were comparatively crude, unreliable, and of questionable validity, (c) there was no leakage, diversion, or loss of cargo between ocean tanker and shore tank, and (d) neither contract of carriage nor governing statute required use of on board measurements at discharge?

5. *Taylor v. Hudson Pulp and Paper Co.*, Case No. 87-486, 56 U.S.L.W. 3344 (filed 9/23/87, cert. denied 11/17/87).

Question presented: . . . (2) When district court fails to find facts that are essential to its judgment, may court of appeals make supplementary findings and affirm on ground that findings, as supplemented on appeal, are not clearly erroneous?

6. *Coherent Inc. v. Spectra-Physics Inc.*, Case No. 87-489, 56 U.S.L.W. 3360 (filed 9/22/87, cert. denied 11/17/87).

Question presented: Did court of appeals engage in improper appellate fact finding when it inferred that inventors had concealed best mode of their inventions in face of contrary findings of fact by district court?

7. *Schwartz v. Dean*, Case No. 87-378, 56 U.S.L.W. 3295 (filed 8/6/87, cert. denied 11/3/87).

Question presented: . . . (6) Did court of appeals err in rejecting "clearly erroneous" standard of review and imposing its "de facto" review of findings of district court in this class "equitable fund doctrine" case?

8. *Mr. W. Fireworks Inc. v. Brock*, Case No. 87-153, 56 U.S.L.W. 3255 (filed 7/20/87, cert. denied 11/4/87).

Question presented: (1) Did court below misapply clearly erroneous standard of Fed.R.Civ.P. 52(a), and ignore this Court's decision in Anderson v. Bessemer City, 470 U.S. 564,

53 LW 4314 (1985), in holding numerous factual findings of district court to be clearly erroneous, even while acknowledging that those findings were supported in record?

9. *Board of Education of Polaris Joint Vocational School District v. Tye*, Case No. 87-144, 56 U.S.L.W. 3175 (filed 7/14/87, cert. denied 10/26/87).

Question presented: . . . (3) Does court of appeals misapply clearly erroneous standard of review, as articulated in Anderson v. Bessemer City, 470 U.S. 564, 53 LW 4314 (1985), when it refuses to accept stipulated facts that district court found to explain employer's legitimate, non-discriminatory reasons, and engages in independent examination of evidence?

10. *Verdegaal Brothers Inc. v. Union Oil Co. of California*, Case No. 86-1994, 56 U.S.L.W. 3081 (filed 6/10/87, cert. denied 10/6/87).

Question presented: May circuit court substitute its view of specific fact issue (what is inherent in term used in particular prior patent) for that of jury where there was conflicting testimony of technical experts and trial judge ruled on motions for summary judgment, directed verdict, and judgment notwithstanding verdict that interpretation of document was jury determination?

11. *Mathis v. Hydro Air Industries, Inc.*, Case No. 86-1966, 56 U.S.L.W. 3100 (filed 6/8/87, cert. denied 10/6/87).

Question presented: . . . (3) Does decision conflict directly with pronouncement of this Court as to application of "clearly erroneous" standard of Fed.R.Civ.P. 52(a)?

12. *Barnes-Hind/Hydrocurve Inc. v. Bausch & Lomb Inc.*, Case No. 86-1917, 56 U.S.L.W. 3081 (filed 6/1/87, cert. denied 10/6/87).

Questions presented: (1) Did court below improperly disregard testimony accepted by district court, contrary to Anderson v. Bessemer City, 470 U.S. 564, 53 LW 4314 (1985), and Fed.R.Civ.P. 52(a)? (2) Did court below improperly make independent factual determination of subsidiary fact, under Graham v. John Deere Co., that prior art taught away from problem, contrary to Dennison Manufacturing Co. v. Panduit Corp., 54 LW 3695 (1986) and Fed.R.Civ.P. 52(a)?

13. *Lawrence v. Dole*, Case No. 86-1913, 55 U.S.L.W. 3859 (filed 5/28/87, cert. denied 9/29/87).

Question presented: . . . (3) Was Rule 52(a) complied with when court of appeals had to read district court opinion as covering subject that opinion clearly stated it was not covering?

14. *Shoe World, Inc. v. El Greco Leather Products Co., Inc.*, Case No. 86-1735, 55 U.S.L.W. 3800 (filed 4/27/87, cert. denied 10/6/87).

Question presented: . . . (2) Did court below apply proper standard of review in reversing, as matter of law, trial court's finding that goods in issue were genuine or should that finding be subject to reversal only upon showing that it was "clearly erroneous"?

15. *Watts v. General Tel. and Electronics Co. of the Southeast*, Case No. 86-1833, 55 U.S.L.W. 3843 (filed 4/24/87, cert. denied 10/6/87).

Question presented: Does federal court of appeals in reviewing district court decision under Fed.R.Civ.P. 52(a) or other applicable standard have discretion to avoid explicit answer of individual error of finding of fact issue cited by appellant when such error is both clear and pivotal to decision reviewed?

16. *Trevino v. U.S.*, Case No. 86-1720, 56 U.S.L.W. 3072 (filed 4/24/87, cert. denied 10/6/87).

Question presented: (1) Does court of appeals' misapplication of U.S. v. United States Gypsum Co., 333 U.S. 364 (1948), mandate review in order to insure proper present and future implementation of Fed.R.Civ.P. 52(a)?

17. *Credit Managers Association of Southern California v. Kennesaw Life and Accident Co.*, Case No. 86-1477, 55 U.S.L.W. 3720 (filed 3/6/87, cert. denied 4/28/87).

Question presented: (1) Did court below, by re-weighing evidence and reversing findings of district court, misapply clearly erroneous standard of Fed.R.Civ.P. 52(a)?

18. *Jimenez-Fuentes v. Gaztambide*, Case No. 86-1213, 55 U.S.L.W. 3631 (filed 1/20/87, cert. denied 4/21/87).

Questions presented: . . . (3) Did court of appeals act under restraint dictated by this Court and Fed.R.Civ.P. 52 in its function of appellate review? (4) Did court of appeals correctly apply "clearly erroneous standard" to findings of district court and then base its own divergent findings on testimony of witness to which trier of facts gave no weight because of witness's demeanor and content of his testimony?

19. *Pitts v. Commissioner of Patents and Trademarks*, Case No. 86-1203, 55 U.S.L.W. 3594 (filed 1/17/86, cert. denied 3/3/87).

Question presented: . . . (2) Is it appropriate for Federal Circuit to apply "clearly erroneous" standard and fail to review entire evidence and instead make piecemeal review that is not supported by evidence?

20. *Enterprise Tools, Inc. v. Export-Import Bank of U.S.*, Case No. 86-1110, 55 U.S.L.W. 3610 (filed 12/30/86, cert. denied 3/24/87).

Question presented: (1) Did court below violate provisions of Fed.R.Civ.P. 52(a) in failing to apply clearly erroneous standard of review?

21. *Geneva County Board of Education v. Hidle*, Case No. 86-968, 55 U.S.L.W. 3519 (filed 12/10/86, cert. denied 2/24/87).

Question presented: . . . (4) May court of appeals render judgment and award damages without referring to facts of case, thereby bypassing strictures of Rule 52(a) that findings of fact shall not be set aside unless clearly erroneous?

22. *Santacroce v. Badgley*, Case No. 86-1046, 55 U.S.L.W. 3501 (filed 11/24/86, cert. denied 1/27/87).

Question presented: (1) Did court of appeals exceed scope of review authorized by Fed.R.Civ.P. 52(a) by conducting de novo review and weighing district court's finding of fact?

23. *Hogue v. Clinton*, Case No. 86-635, 55 U.S.L.W. 3416 (filed 10/14/86, cert. denied 12/9/86).

Question presented: May court of appeals ignore mandates of Fed.R.Civ.P. 52(a) and Anderson v. City of Bessemer City, North Carolina, 470 U.S. 564, 53 LW 4314 (1985), and superimpose its judgment on questions of fact in wrongful discharge action over trial court sitting as jury and, in effect, try case de novo on appeal?